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Canadian Emissions Inventory of Common Air Contaminants (1985)

Report EPS 5/AP/3
March 1990

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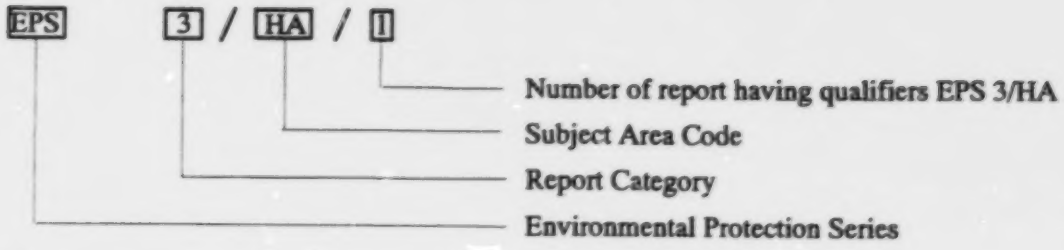

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by
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Abstract

Environment Canada has undertaken the task of maintaining a national emissions inventory since the early seventies. Since that time, the inventory process has been continually modified to minimize the errors in the estimation process and to complement other environmental studies. The results of the 1985 national emissions inventory as well as a description of the general methodologies employed are presented in this report. It also examines the computerized data handling system and additional information which has been assembled for modelling activities.

All anthropogenic point and area sources are included in this inventory. A source is inventoried on an individual point source basis if it meets the following criteria:

- *The source must emit one of the common air contaminants monitored in this inventory.*

- *The annual emission levels for any one of the common air contaminants for a specific source must amount to a minimum of 100 t/y.*

The inventory is based on 1985 data and statistics which were used to compile the emissions on a provincial and sectoral basis. These emissions estimates were then resolved to 127 km by 127 km grids across Canada's provinces and territories for the atmospheric modelling requirements used in studies to determine the long-range transportation of air pollutants.

Anthropogenic sources of emissions from point and area sources contributed a total of 1.7 x 10^6 tonnes of total particulate matter, 3.7 x 10^6 tonnes of sulphur oxides, 2 x 10^6 tonnes of nitrogen oxides, 10.3 x 10^6 tonnes of carbons monoxide, 2.3 x 10^6 tonnes of total hydrocarbons, and 1.8 x 10^6 tonnes of volatile organic compounds to the emissions released to the atmosphere.

Résumé

Environnement Canada a entrepris la tâche d'inventorier les émissions de polluants atmosphériques à l'échelle nationale dès le début des années 70. Depuis lors, le procédé utilisé pour l'inventaire a continuellement été modifié afin de minimiser les erreurs pouvant se produire dans les estimations et de compléter d'autres études environnementales. Le présent rapport expose les résultats de l'inventaire national des émissions de 1985 et décrit les méthodes générales utilisées pour l'établir. On y traite aussi du système informatique de traitement des données ainsi que des renseignements additionnels rassemblés en vue d'activités de modélisation.

Toutes les sources anthropiques, qu'elles soient ponctuelles ou diffuses, sont comprises dans l'inventaire. Pour être inventoriée, une source doit répondre aux critères suivants :

- *émettre l'un des principaux contaminants atmosphériques visés par l'inventaire;*

- *produire un niveau minimal annuel de 100 t d'émissions de l'un ou l'autre des principaux contaminants atmosphériques.*

L'inventaire est basé sur des données et des statistiques de 1985, qui ont servi à compiler les émissions par province et par secteur. Les estimations ainsi établies ont ensuite été réparties sur une grille formée de carrés de 127 km de côté couvrant l'ensemble des provinces et des territoires, pour répondre aux besoins de modélisation d'études sur le transport à distance des polluants atmosphériques.

Les sources anthropiques d'émissions, tant ponctuelles que diffuses, ont libéré au total dans l'atmosphère, en 1985, 1,7 x 10^6 t de particules, 3,7 x 10^6 t d'anhydride sulfureux, 2 x 10^6 t d'oxydes d'azote, 10,3 x 10^6 t de monoxyde de carbone, 2,3 x 10^6 t d'hydrocarbures totaux et 1,8 x 10^6 t de composés organiques volatils.

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Acknowledgement

This report was originally based on a report by M.E. Yandle of Concord Scientific. It was prepared under contract for Environment Canada.

Update

The Canadian Council of Ministers of the Environment (CCME) announced on October 6, 1988 that a federal/provincial plan for the further management of emissions of nitrogen oxides and volatile organic compounds would be developed and delivered to CCME by October, 1990. In response, workshops were held by Environment Canada to inform interested stakeholders about the current state of science on this issue. Working groups were established to review and to refine the information base which included information on emissions inventories. The participants felt that several sectors within the 1985 inventory should be further examined and refined to the greatest extent possible. The results from this initiative to date can be summarized as follows.

Revisions on a national basis have been made to the following sectors:

- Railroads
- Vehicles (including light and heavy duty)
- Manufacturing of plastic products
- Solvent uses (including dry cleaning, surface coatings, households uses, etc.)

The impact of these modifications to the 1985 national inventory, which forms the basis of this report, is shown in the Tables that follow. Nationally, emissions of nitrogen oxides have decreased by 74 kilotonnes or 3.8 percent while emissions of volatile organic compounds have increased by 56 kilotonnes or 3.1 percent. The differences on a sector basis are also presented. Details on the revisions made to these sectors can be found in the report: CCME NO_x/VOC Consultation Plan - Report to the Federal-Provincial LRTAP Steering Committee on the Status of the National Inventory of NO_x/VOCs, February, 1990.

Revisions are anticipated for the following sectors because of on-going work but results are not yet available.

- Petrochemical plants
- Petroleum refineries
- Petroleum production
- Natural gas production

They will be documented in future releases of reports under the CCME NO_x/ VOC consultation plan.

Table U.1 Revised National Emission Estimates 1985

	Emissions (kilotonnes)			
	NO_x		VOC	
Sector	Report	Update	Report	Update
Light-duty Vehicles				
Automobiles	391	352	471	412
Gasoline Trucks	123	95	192	143
Diesel Trucks	4	6	1	1
Heavy-duty Vehicles				
Gasoline Trucks	25	21	29	25
Diesel Trucks	261	264	35	29
Motorcycles	1	1	4	3
Railroads	140	132	10	7
Plastics Industry	-	-	49	14
Dry Cleaning	-	-	48	14
Surface Coatings	-	-	122	188
Solvent Use	-	-	120	300
Total	945	871	1080	1136
Other Sectors	1014	1014	718	718
National Total	1959	1885	1798	1854

Notes:

Road vehicle emissions have been revised by using the latest EPA Mobile 4 model instead of Mobile 3. Also provincial vehicle mix data by climate zones were used to generate average provincial emission rates.

The Railway Association of Canada indicated that revised emission factors for locomotives have recently been reported by the American Association of Railroads. These factors, which were developed from tests on 57 locomotives between 1981 and 1983, were judged to be more representative of current emission rates.

The Environment and Plastics Institute of Canada, supplied resin consumption statistics and several emission factors and the type of process used. This information was used although not all emission factors were based on test data.

Improved statistics on the consumption of solvents were obtained from industry. Additional details and the latest emission factors were taken from a recent internal study.

Table U.2 Revised Provincial Emission Estimates - 1985 VOC Emissions (kilotonnes)

	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	NWT/Yukon
Total Particulate Matter											
Industrial Processes											
Plastics	<0.1	-	0.1	0.1	3.5	8.1	0.3	0.1	0.7	0.7	-
Transportation											
Light-duty Vehicles											
Automobiles	5.1	1.7	11.3	8.9	81.9	154.9	22.2	17.3	50.4	58.3	0.7
Gas Trucks	2.8	0.7	5.5	4.5	12.2	50.8	9.3	13.4	16.1	26.3	1.1
Diesel Trucks	<0.1	<0.1	0.1	0.1	0.1	0.6	0.1	0.1	0.2	0.2	<0.1
Heavy-duty Vehicles											
Gas Trucks	0.7	0.2	1.2	1.0	3.6	2.3	1.9	3.1	3.9	6.9	0.3
Diesel Trucks	0.6	0.2	1.4	1.0	3.1	8.9	1.8	2.6	3.6	5.2	0.3
Railroads	<0.1	<0.1	0.2	0.1	0.9	1.6	0.9	0.5	1.8	0.9	<0.1
Miscellaneous											
Dry Cleaning	0.3	0.1	0.5	0.4	3.6	5.0	0.6	0.6	1.3	1.6	<0.1
Surface Coatings	2.8	1.1	4.6	3.8	48.5	83.3	5.8	5.1	10.7	21.5	0.3
Solvent Use	6.0	1.3	9.3	7.5	69.1	129.6	11.3	10.8	24.8	30.3	0.8
Total											
Update	**18.6**	**5.5**	**34.2**	**27.4**	**226.2**	**445.1**	**54.2**	**53.6**	**113.5**	**151.9**	**3.8**
85 Report*	18.5	5.5	35.7	28.1	213.3	413.7	0.8	49.6	112.0	146.2	1.9
Non-revised Sectors*	17.0	5.5	18.0	18.0	145.9	207.6	16.8	30.3	115.7	142.8	3.2
Provincial Total											
Update	**35.6**	**11.0**	**52.2**	**45.4**	**372.1**	**652.7**	**71.0**	**83.9**	**229.2**	**294.7**	**7.0**
'85 Report*	35.5	11.0	53.7	46.1	359.2	621.3	67.3	79.9	227.7	289.0	5.1

* These data are presented in the body of this report.

Table U.3 Revised Provincial Emission Estimates - 1985 NO_x Emissions (kilotonnes)

	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	NWT/Yukon
Transportation											
Light-duty Vehicles											
Automobiles	4.9	1.6	10.6	8.3	72.6	134.4	17.1	3.1	42.3	46.6	0.5
Gas Trucks	2.1	0.5	4.0	3.3	8.5	33.0	6.1	8.7	11.2	17.3	0.7
Diesel Trucks	0.1	<0.1	0.2	0.2	0.5	2.3	0.3	0.4	0.6	0.9	<0.1
Heavy-duty Vehicles											
Gas Trucks	0.7	0.2	1.1	0.9	3.1	2.0	1.7	2.7	3.5	4.8	0.2
Diesel Trucks	5.6	1.5	12.8	8.8	28.7	82.6	6.2	24.1	33.5	48.2	2.3
Railroads	0.8	0.1	4.1	2.4	16.9	30.3	17.2	9.6	33.8	16.8	0.1
Total											
Update	**14.2**	**4.0**	**32.8**	**23.9**	**130.3**	**284.6**	**58.6**	**58.6**	**124.9**	**134.6**	**3.9**
85 Report*	15.6	4.4	36.2	23.8	147.4	312.2	61.4	61.3	131.8	145.0	1.9
Non-Revised Sectors*	19.5	1.6	41.5	22.5	92.5	272.9	23.3	97.0	315.4	118.0	12.1
Provincial Total											
Update	**33.7**	**5.6**	**74.3**	**46.4**	**222.8**	**557.5**	**81.9**	**155.6**	**440.3**	**252.6**	**16.0**
'85 Report*	35.1	6.0	77.7	46.3	239.9	585.1	84.7	158.3	447.2	263.0	14.0

* These data are presented in the body of this report.

Summary

This national emissions inventory represents anthropogenic sources of emissions from the following point and area sources:

- industrial sources
- fuel combustion in stationary sources
- fuel combustion in mobile (transportation) sources
- waste incineration (including wood waste incineration), and
- miscellaneous sources.

All point sources emitting a minimum of 100 tonnes per year, of any of the parameters monitored, are included in this inventory. These parameters consist of: total particulate matter (TPM), sulphur dioxide (SO_2), nitrogen oxides (NO_x), carbon monoxide (CO), total hydrocarbon (THC) and volatile organic compounds (VOC). The inventory is based on 1985 data and statistics which were used to compile the emissions on a provincial and sectoral basis. These emissions estimates were then resolved to 127 km by 127 km grids across Canada's provinces and territories for the atmospheric modeling requirements used in studies to determine the long-range transportation of air pollutants.

A summary of the atmospheric emissions from Canadian sources in 1985 is presented in Table S.1 and Figure S.1. An overview of national emissions follows.

Table S.1 1985 Summary of Emissions by Province (tonnes per year)

	Nfld.	P.E.I.	N.S	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	NWT	Yukon	National
Total Particulate Matter													
Industrial	101 318	195	46 657	51 270	154 320	97 540	33 006	69 378	138 707	210 573	454	6 742	910 160
Stationary Fuel Combustion	15 536	6 583	15 206	24 234	77 564	84 235	9 268	39 421	44 410	58 268	2 273	0	376 998
Transportation	2 127	441	3 682	2 282	16 117	40 812	5 704	7 923	15 186	15 338	759	171	110 533
Incineration	100	36	379	785	6 590	5 407	181	449	1 827	22 342	6	0	38 102
Miscellaneous	4 110	913	6 222	11 781	55 250	54 714	5 814	8 806	18 593	107 054	341	93	273 691
Total	**123 191**	**8 168**	**72 146**	**90 352**	**309 841**	**282 708**	**53 973**	**125 977**	**218 723**	**413 575**	**3 823**	**7 006**	**1 709 484**
Sulphur Dioxide													
Industrial	2 778	0	11 889	20 341	569 318	977 978	459 720	8 378	446 621	75 548	0	341	2 572 912
Stationary Fuel Combustion	38 349	1 345	155 161	115 560	90 349	429 986	6 375	73 781	87 411	17 348	1 427	0	1 017 091
Transportation	2 234	340	3 361	1 771	32 314	31 631	3 026	3 361	4 548	11 930	311	30	94 858
Miscellaneous	20	5	36	39	734	402	43	46	115	305	3	0	1 748
Total	**43 381**	**1 690**	**170 447**	**137 711**	**692 715**	**1 439 998**	**469 164**	**85 566**	**538 695**	**105 131**	**1 741**	**371**	**3 686 69**
Nitrogen Oxides													
Industrial	1 320	0	1 585	2 647	6 860	38 154	572	857	26 243	10 693	0	0	88 931
Stationary Fuel Combustion	8 953	618	27 618	13 489	34 246	168 155	7 622	61 316	222 404	45 238	3 732	0	593 391
Transportation	24 502	5 312	47 914	29 053	192 759	376 344	76 147	95 617	197 060	195 783	10 284	2 126	1 252 90
Icineration	68	19	136	170	1 851	2 160	146	156	471	2 263	10	0	7 450
Miscellaneous	295	48	404	928	4 160	317	202	355	1 055	9 033	22	0	16 819
Total	**35 138**	**5 997**	**77 657**	**46 287**	**239 876**	**585 130**	**84 689**	**158 301**	**447 233**	**263 010**	**14 048**	**2 126**	**1 959 42**
Carbon Monoxide													
Industrial	0	0	443	5 556	198 797	455 793	1 238	8 844	28 986	75 292	0	0	774 849
Stationary Fuel Combustion	51 592	26 303	35 493	32 676	237 391	212 054	14 375	65 972	86 751	492 945	8 782	0	1 264 334
Transportation	128 456	34 686	235 427	187 454	1 159 360	2 341 057	401 498	544 175	1 079 518	1 015 811	22 893	13 282	7 163 617
Incineration	757	313	3 739	8 945	77 800	39 060	1 199	4 258	19 357	274 005	8	0	429 411
Miscellaneous	17 091	2 932	23 654	53 160	241 155	194 756	12 790	20 872	61 988	518 774	1 292	42	1 148 506
Total	**197 896**	**64 234**	**298 756**	**287 791**	**1 914 503**	**3 242 720**	**431 000**	**644 121**	**1 276 600**	**2 376 827**	**32 975**	**13 324**	**10 780 747**
Total Hydrocarbons													
Industrial	70	5	20 304	5 731	59 906	131 455	1 712	41 723	177 212	139 462	351	0	577 931
Stationary Fuel Combustion	9 075	4 578	5 447	5 524	41 584	39 234	3 034	3 424	44 480	63 385	1 658	0	221 423
Transportation	19 653	4 587	33 117	25 209	160 044	330 870	51 941	62 642	127 428	141 989	2 903	1 625	962 008
Incineration	74	29	334	741	14 628	4 428	124	378	1 692	20 829	2	0	43 259
Miscellaneous	9 095	2 423	14 675	16 138	121 849	169 755	16 578	16 289	41 413	101 818	697	403	511 133
Total	**37 967**	**11 622**	**73 877**	**53 343**	**398 011**	**675 742**	**73 389**	**124 456**	**392 225**	**467 483**	**5 611**	**2 028**	**2 315 754**
Volatile Organic Compounds													
Industrial	49	5	4 426	2 842	50 727	114 172	1 599	4 196	63 256	16 818	193	0	258 283
Stationary Fuel Combustion	8 954	4 522	5 057	5 402	40 692	36 578	2 644	3 010	8 506	47 132	1 570	0	164 068
Transportation	17 815	4 148	29 988	22 782	144 624	298 939	47 029	56 806	115 420	128 542	2 650	1 471	870 215
Incineration	32	12	139	301	7 587	2 044	56	157	692	8 349	1	0	19 370
Miscellaneous	8 649	2 349	14 064	14 735	115 560	169 600	16 273	15 753	39 818	88 163	664	403	486 032
Total	**35 499**	**11 036**	**53 674**	**46 062**	**359 190**	**621 333**	**67 601**	**79 922**	**227 692**	**289 004**	**5 078**	**1 874**	**1 798**

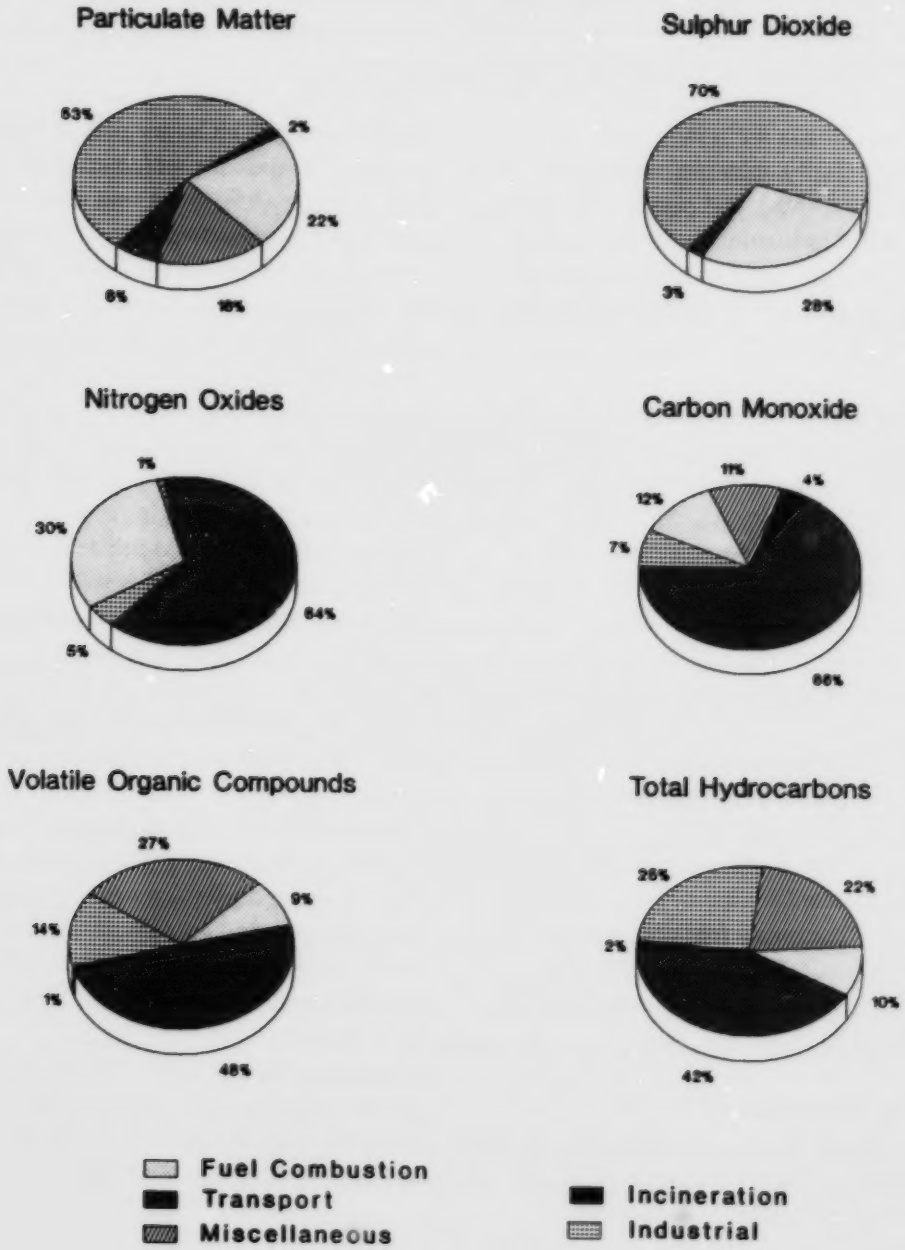

Figure S.1 **Total Canadian Emissions by Source Category For Particulate Matter SO_2, NO_x, VOC, CO, and THC (1985)**

Total Particulate Matter. National emissions of total particulate matter (TPM) are estimated to be 1.7 x 10^6 t/y. Industrial sources collectively contributed 54% of the national total. A more detailed summary by sector is provided in Table S.1. The major sources of particulate matter in Canada are mining and rock quarrying (10%), iron ore mining and beneficiation (8%), and power generation (8%). Most industrial sources as well as power generation plants employ control devices specifically designed to limit the emission of particulate matter.

Sulphur Dioxide. Nationally, 3.7 x 10^6 tonnes of sulphur dioxide (SO_2) are estimated to have been released into the atmosphere in 1985. Of this total, industrial sources contributed to 70% of the national total. The nickel and copper smelting sources and some larger power plants are generally limiting the SO_2 emissions through some type of controls.

Nitrogen Oxides. Emissions of nitrogen oxides (NO_x) were estimated to total 2.0 x 10^6 t/y Canada-wide. Transportation sources collectively are the most significant source of NO_x at 64% of the total. Stationary fuel combustion accounts for 30% of the total NO_x emissions, while remaining sources contributed a mere 6%.

Carbon Monoxide. In Canada, 10.3 x 10^6 t/y of CO were released into the atmosphere. Carbon monoxide (CO) is commonly generated as a by-product derived from the inefficient combustion of traditional fossil fuels and wood. Although carbon monoxide plays a minor role in the photochemical reactions that create haze and smog, it has been a great concern in many areas. The agglomerative effect of emissions from transportation vehicles is the major contributor to National CO emissions.

Total Hydrocarbons. Total hydrocarbons (THCs) are part of a large group of compounds which contain carbon and hydrogen. About 75% of THCs can be classified as volatile organic compounds which are far more reactive in the atmosphere than nonreactive organics such as methane, ethane and chloro-fluoro carbons (CFCs). Emissions of total hydrocarbons amounted to 2.3 x 10^6 tonnes in 1985. Transportation sources which contributed to 42% of THCs were the most important single source. Industrial processes and miscellaneous sources contributed 25% and 22% of THCs respectively. The total industrial contribution to THCs is actually higher than 25% since hydrocarbon losses from industrial solvent and fuel are grouped under the miscellaneous category.

Volatile Organic Compounds. Volatile organic compounds (VOCs) consist of reactive compounds that originate mainly from solvents and gasoline since they are readily vapourized at relatively low temperatures. A total of 1.8 x 10^6 tonnes of VOCs were released into the atmosphere during 1985. The largest contributor to volatile organic compounds was the transportation sector which produces 48% of the total emissions.

Glossary of Terms

Acid Deposition Precursor:	A material such as SO_2 or NO_x which is transformed to become a component of acidic deposition.
Acid Rain:	Sulphuric, nitric, organic, or other acids that acidify rain water.
Acidic Deposition:	The transfer of acidic or acidifying materials from the atmosphere by dry and wet deposition to the earth.
ADOM:	Acid Deposition and Oxidants Model used by the Atmospheric Environment Service to study the transport and deposition of air pollutants.
Area Sources:	Activities or numerous smaller sources for which source and emission information are maintained in the inventory on an aggregate or collective basis. For some sectors, combined point and area source emissions constitute the total emissions.
Base Quantity:	Is an activity level or rate indicating the amount of fuel consumed, quantity of product manufactured in an industrial process, or some comparative measure.
Category:	A combined group of economic sectors in a major category (e.g., industry, transportation) which, for emission inventory purposes, permits an identification of the contribution from broadly related activities to be made.
Common Pollutant:	Pollutants historically regarded as being the most significant air pollutants and are known as the criteria pollutants at the U.S. EPA (i.e., particulate matter, sulphur dioxide, nitrogen oxides, total hydrocarbons, carbon monoxide).
Dry Deposition:	Removal of trace gases and particles from the atmosphere through interactions with various surfaces except water.

Emission Factor:	An estimate or statistical average of the rate at which a contaminant is released to the atmosphere as a result of some activity, such as combustion or industrial production, divided by the level of that activity. The emission factor, therefore, relates the average quantity of each contaminant emitted according to an appropriate base quantity. It is usually expressed as the weight of contaminant divided by a unit weight, volume, distance or duration of the associated activity that emits the pollutant (e.g., kg of SO_2 emitted per tonne of coal burned). Emission factors are usually obtained from data of varying degrees of accuracy and may be presented for either uncontrolled sources or facilities having air pollution control devices in place.
EPA:	Environmental Protection Agency in the United States which is the U.S. equivalent to Environment Canada.
Eulerian:	A method for modeling fluid processes which depends upon a framework of fixed coordinates. These models track the activity at a specific location. The Acid Deposition and Oxidants Model is a model of this type.
Fugitive Emissions:	Air pollution derived from human activities that does not emanate from a particular point, such as an exhaust pipe or stack. Roadway dust and VOC from refinery valves are examples of fugitive emissions.
Grid:	Identifies a geographical zone for reporting area source emissions. Grid squares of 127 by 127 km and 20 by 20 km are used for reporting Canadian emission data.
Mobile Source:	A segment of the area source classification representing transportation sources such as vehicles, aircraft and railroads.
Nitrogen Oxides:	Consist of nitrous oxide (NO) and nitrogen dioxide (NO_2) and are reported as NO_x.
Particulate Matter:	Particulate matter or total particulate matter (TPM) is any aerosol that is released to the atmosphere in either solid or liquid form. The upper size limit is generally considered to be about 75 μm in aerodynamic equivalent diameter.

Point Source:	Any stationary source that usually releases emissions through stacks at elevated heights for which individual source records are maintained in the inventory and for which annual emissions exceed a specified cutoff level. Although there is no uniform designated cutoff level, sources with emissions that generally exceed 100 t/y for any one of the five common pollutants are generally included in the inventories. Similarly, emission points that release approximately 500 t/y are regarded as major point sources.
Proration:	Reporting emission data for sources and/or geographical areas for which no base quantities are available by relating the source to some other parameter such as population.
SCC:	Source Classification Code established by the U.S. EPA and customized for Canadian sources by Environment Canada for estimating emissions at the industrial process level.
Sector:	A grouping of similar industries or other entities that are involved with common activities such as petroleum refining or aluminum production. In many instances, a Standard Industrial Classification (SIC) code is used to describe an industry or activity for purposes of facilitating the collection and assimilation of data relating to the establishment. These data can then be compiled on a Database Management System to accurately record emission sources in a particular sector.
SIC:	Standard Industrial Classification Code is a classification system determined by Statistics Canada for reporting survey data on various manufacturing activities in Canada.
Source:	Any structure, facility, equipment or operation (or combination thereof), located on a property, which is owned, controlled or operated by one or more persons. In many instances, a Source Classification Code (SCC) is used which specifically identifies the source or operational process and defines the units of activity level. Emissions may be calculated by multiplying the emission factor for each SCC and the activity level.

Spatial Resolution:	The reporting of emission data by geographic locations.
Speciation:	Is the determination and reporting of specific elements or compounds that constitute pollutants such as Particulate Matter, Nitrogen Oxides and Volatile Organic Compounds.
Sulphur Dioxide:	Refers to gaseous sulphur dioxide (SO_2) for which national and provincial air quality objectives and regulations have been promulgated. In some cases, emissions may contain small amounts of sulphur trioxide (SO_3) and sulphurous and sulphuric acid vapour. However, particulate or aerosol sulphate is excluded from emission totals.
Surrogate:	A parameter that is used as a substitute variable for which no values are available.
Temporal Factor:	An estimated or measured fraction that is employed when providing a monthly, day of the week, or hourly portion of an annual emission value.
THC:	Total Hydrocarbons include all volatile organic compounds that are released to the atmosphere.
VOC:	Volatile Organic Compounds are also known as Reactive Organic Gases (ROG) or Non-methane Volatile Organic Compounds (N-MVOC). Volatile Organic Compounds refer only to photochemically reactive hydrocarbons and therefore exclude compounds such as methane, ethane and several chlorinated organics.

Section 1

Introduction and Background

The primary objective for producing an emission inventory is to assess the relative contribution of pollutants from various sources. The compilation of emissions from each known source allows comparisons by source, pollutant and region. Relative contributions are vital for assessing the magnitude of environmental impacts originating from a particular source type. This type of emissions data is also important for assessing the possible benefits that may be achieved through controls and reductions.

The inventory for 1985 represents an update of the 1980 national emissions inventory with several enhancements. In spite of this, the method of compilation has remained essentially the same.

The inventory of emissions has been conducted since 1970. However, the complexity of gathering information has since increased and many new sources of information have been incorporated. A number of steps were taken to overcome these problems. The pollutants in the inventory have been consolidated and emission factors have been standardized whenever possible. Modifications have also been driven by the efforts to exchange emissions information with the United States Environmental Protection Agency (U.S. EPA). The collaborative efforts of the EPA have made it possible to estimate inter-boundary emission levels and to support long-range modeling activities. Together, these modifications facilitate a more accurate and uniform means of estimating emission levels on the North American continent.

A considerable amount of cooperation from provincial ministries was required to produce this inventory and to fulfill the requirements of provincial agencies within the national framework. Their efforts to provide comprehensive emissions information for this publication are gratefully acknowledged.

1.1 Objectives

The objective of this emissions inventory is to provide accurate national estimates of atmospheric emissions by source type. The inventory is also designed to represent the current spatial and temporal distributions of the emissions. A comparison of the contributions made by various sources is also important to efforts intended to maintain and improve ambient air quality. An accurate inventory of each source makes it possible to assess the potential environmental impact of increasing industrial activity.

Another function of the emissions inventory is to augment the research activities of dispersion modeling. Sulphur dioxide and oxides of nitrogen are of particular importance to the emissions inventory due to their relationship to acid rain. For modeling purposes, data elements such as stack height, stack diameter, exit velocity and temperature, as well as control devices and efficiencies were added to the inventory database. As

indicated previously, activity levels have been included to define source activity by season, day of the week and hour of the day.

1.2 Scope of the 1985 National Emissions Inventory

The 1985 National Emissions Inventory for Canada is a compilation of information on emissions in the ten provinces and the two territories. Annual emissions data have been obtained for the following pollutants:

1. particulate matter (TPM),
2. sulphur dioxide (SO_2),
3. nitrogen oxides (NO_x),
4. carbon monoxide (CO),
5. total hydrocarbons (THC), and
6. volatile organic compounds (VOC) (excludes methane and other nonreactive THC species).

Although not covered in this report, the following information has been assembled and is part of the emissions inventory which is supplied to the atmospheric modeling community. Volatile organic compound emissions have been speciated into ten reactivity classes using Environmental Protection Agency (EPA) VOC species profiles[1]. Particulate matter has been further defined as fractions of calcium, magnesium, potassium, and sodium. Sulphate and ammonia emissions have been added because of their importance in atmospheric chemistry.

Detailed information regarding the activity level on a daily, weekly and seasonal basis has been compiled for each source type. These profiles provide a temporal resolution of one hour for each source classification. The profiles encompass point, mobile, and other area sources. Spatially, the emissions were also dissaggregated over standard areas marked by grids of 127 km by 127 km which represent all of the Canadian territory.

1.3 Improvements

To increase the compatibility of the Canadian inventory for the National Acidic Precipitation Assessment Program (NAPAP), standard U.S. EPA emission factors were used whenever Canadian sampling data were not available.

The 1985 Canadian Emissions Inventory of Common Air Contaminants represents a collaborative effort with the U.S. EPA to develop an updated North American inventory. The 1980 edition was also based on cooperation with the EPA. All facets of the inventory were considered, and several improvements were incorporated in the 1985 Emissions Inventory. Areas of improvement in the inventory were inspired by concerns over acid rain, and tropospheric ozone. Research on these issues was motivated by dispersion modeling efforts. Enhancements to existing emission inventories were necessary to ensure greater precision. In this regard, measures were taken to increase the level of detailed information on provincial sources as well as information about any add-on controls. In addition to this, improvements were made to the standardization of methodologies and to the data handling system.

The identification of source type is provided by both Source Classification Code (SCC) and Standard Industrial Code (SIC) for ease of retrieval (Appendix B).

In areas where Canadian source data existed, these data have been employed in the inventory. A complete list of the source sectors in the inventory is provided in Appendix B.

1.4 Report Organization

The structure of this Emissions Inventory Report has been revised since 1980. The underlying concept of its design is to address the needs of a diverse audience. The report begins with a summary of findings on various emissions which are discussed in greater detail in the Sections that follow.

The results of the 1985 emissions inventory are outlined in the Executive Summary. These data are presented and interpreted in greater detail in Section 2.

The methodologies employed in the compilation of emissions are summarized by major category in Section 3. A description of the enhancements made to the 1985 inventory, especially in support of modeling activities, is provided in Section 4. Section 5 provides details on the database system maintained for the emissions inventory, and provides potential users with the file and data structures to make use of data existing in the Residual Discharge Inventory System (RDIS).

Section 6 of the report is intended to provide an insight into future activities and improvements.

Supplementary information includes a glossary and various detailed listings of information in the three appendices.

Overview of National Emission Levels

The 1985 Canadian Inventory of Common Air Contaminants provides estimates of the emissions for approximately 80 different source categories. For greater ease of presentation, these sources have been categorized into approximately 50 sectors and five major source types. Total emissions are summarized by source type in Table 1.

This overview provides an estimate of the national emission levels for: sulphur dioxide, nitrogen oxides, total hydrocarbons, volatile organic compounds, carbon monoxide and particulate matter. In many cases, the major sources of these contaminants are identified along with their province of origin.

2.1 Total Particulate Matter

A wide range of sources are associated with the emissions of particulate matter. Many industrial processes, stationary fuel combustion, and miscellaneous sources such as slash burning and structural fires, generate particulate matter emissions. Particulate emissions are comparatively easy to control in most industrial sources. Area sources of particulate emissions such as slash burning are virtually impossible to control.

Nationally, an estimated 1.7×10^6 tonnes of particulate matter were emitted from various sources. Particulate matter emissions display the most distinct seasonal pattern (Table 2) with low values during winter months where ground cover and precipitation decrease TPM levels.

2.2 Sulphur Dioxide

Nationally, an estimated 3.7×10^6 t/y of sulphur dioxide were emitted into the atmosphere by Canadian sources. The largest factor in SO_2 reductions has been the increased use of control devices for industrial sources as stipulated by more stringent legislation.
Of the total sulphur dioxide emissions in Canada, approximately 70% were associated with industrial and manufacturing processes. The relative contributions from other sources are depicted on a national basis in Figure S.1. Nonferrous smelting is the major contributor followed by thermal power generation.

The extensive industrial activity in Ontario is reflected by its provincial emission estimates with the highest SO_2 contribution arising from industrial activity. Alberta, British Columbia, Manitoba and Quebec also produce high levels of SO_2 through their industrial sector. In the provinces where industrial activity is less dominant, such as the Atlantic provinces and Saskatchewan, fuel combustion is the dominant source of SO_2 emissions.

Little seasonal variation in sulphur dioxide levels occurs throughout the year (Table 2). This is consistent with the nature of manufacturing processes that account for the largest contribution of SO_2 emissions.

Table 1 Summary of National Emissions (1985)

Category / Sector	TPM	SO_2	NOx	CO	THC	VOC
			(tonnes per year)			
Industrial						
Iron Ore	103 019	116 657		47 518		
Iron & Steel	15 647			208 109		
Aluminum	18 950	22 802		223 380		
Copper & Nickel	20 394	1 625 673				
Lead & Zinc	4 329	123 057				
Gold		9 937				
Crude Oil	30 003	73 959	15 379	61 662	66 940	40 164
Gas Plants		265 573				
Coal Production					261 540	
Petrochemicals					126 815	107 793
Plastics					48 619	48 619
Kraft Pulping			18 188		14 515	14 515
Tar Sands		162 425	15 975			
Asbestos	4 170					
Mining & Quarrying	201 164					
Coal Industry	165 467					
Carbon Black				117 211		
Chemical Pulping	115 010	60 182		33 088		
Sawmills	39 363					
Other	213 814	82 644	39 389	83 881	32 193	32 172
Subtotal	**910 160**	**2 572 912**	**88 931**	**774 849**	**577 931**	**258 283**
Fuel Combustion						
Stationary						
Refineries	5 119	43 679	16 796	53 345	1 917	671
Gas Plants	1 054		158 723	25 852	49 616	6 301
Other Industrial	107 859	176 680	102 690	481 404	50 973	42 617
Commercial	2 710	23 592	25 898	6 958	2 076	1 331
Residential	4 565	31 664	37 493	16 446	5 269	2 662
Fuelwood	155 919	3 746	3 899	624 212	108 025	107 866
Power Plants						
Utilities	98 882	735 939	235 061	52 900	2 624	1 928
Other	890	1 792	12 831	3 218	923	692
Subtotal	**376 998**	**1 017 092**	**593 391**	**1 264 334**	**221 423**	**164 068**
Transportation						
Gasoline						
Cars	43 256	10 622	392 077	4 015 545	523 039	470 735
L-D Trucks	9 740	3 996	123 251	1 416 139	213 087	191 778
H-D Trucks	2 549	750	25 019	335 208	32 428	29 185
Motorcycles	249	32	968	14 841	4 851	4 366
Diesel						
L-D Trucks	1 265	1 794	4 351	3 426	1 457	1 393
H-D Trucks	18 984	19 600	260 677	100 348	35 992	34 408
Other	20 487	14 867	230 304	69 559	24 446	23 370
Other						
Railroads	6 523	7 181	137 839	48 265	10 652	10 183
Marine	3 927	33 361	16 747	84 898	30 589	27 922
Aircraft	1 064	1 733	33 499	116 550	11 413	10 158
Off-road Gas	2 489	921	28 169	958 838	73 381	66 043
Tire Wear					673	673
Subtotal	**110 533**	**94 857**	**1 252 901**	**7 163 617**	**962 008**	**870 214**
Incineration						
Wood Waste	32 925	301	2 993	389 118	32 925	13 170
Other	5 177	1 447	4 457	40 323	10 334	6 200
Subtotal	**38 102**	**1 748**	**7 450**	**429 441**	**43 259**	**19 370**
Miscellaneous						
Fuel Marketing					108 771	108 771
Structural Fires					6 262	6 262
Pesticide Applic.	9 543					
Slash Burning	219 614		16 819	1 134 496	105 910	80 809
Other	44 534			14 010		
Solvent Use						
Dry Cleaning					48 259	48 259
Surface Coatings					122 167	122 167
General Use					119 764	119 764
Subtotal	**273 691**		**16 819**	**1 148 506**	**511 133**	**486 032**
National Total	**1 709 484**	**3 686 689**	**1 959 492**	**10 780 747**	**2 315 754**	**1 797 967**

Table 2 Seasonal Distribution of Emissions (Percent)

	Winter	Spring	Summer	Fall
TPM	21	29	29	21
SO_2	26	25	25	24
NO_x	25	25	25	25
CO	23	25	29	23
THC	24	25	27	24
VOC	24	25	27	24

2.3 Nitrogen Oxides

Emissions of nitrogen oxides are primarily associated with the combustion of fossil fuels. Most sources of nitrogen oxides, especially the smaller ones such as home heating, are generally not controlled. As a result, NO_x emissions are directly linked to human activity. Automobiles have required control devices that decrease NO_x emissions since the implementation of motor vehicle regulations in the early 1970s. Despite the decreased emissions per vehicle, NO_x emissions have essentially remained constant, reflecting the increase in the number of vehicles.

Nitrogen oxide emissions have experienced a steady rise since the first inventory of NO_x emissions in 1970[2]. In 1985 an estimated total of 2.0×10^6 tonnes were emitted into the atmosphere (Table 1).

Transportation represented the largest contribution of NO_x emissions on a national basis. Nitrogen oxide emissions from transportation sources accounted for 64% of total NO_x emissions by anthropogenic sources.

Stationary fuel combustion and other sources accounted for the rest of the NO_x emissions (Figure S.1). The relative importance of the transportation sources for NO_x are:

1. gasoline powered vehicles (28%),
2. diesel powered vehicles (25%),
3. railroads (7%), and
4. marine, aircraft, and off-road sources (4%).

In the latest models of gasoline powered vehicles, exhaust gas recycling systems moderate NO_x emissions. However, older gasoline powered vehicles, diesel powered vehicles, locomotives and other internal combustion engines are not equally well controlled for NO_x emissions. The continuing increase in the number of transportation sources is also a factor in the relative importance of these sources.

In provinces such as Manitoba with less industrial activity, transportation sources can amount to 90% of all NO_x emissions. Therefore, areas with the highest NO_x emission densities are, in most cases, major urban centres. Exceptions to this trend can be found in the Atlantic provinces where thermal power generation was a more significant source. The combined total of NO_x emissions from Ontario and Alberta account for over half of the National total at 1.03×10^6 tonnes.

While sources such as power generation and residential fuel combustion vary seasonally, the relative magnitude of the transportation sources masks the seasonal variation of NO_x emissions (Table 2).

2.4 Carbon Monoxide

Carbon monoxide (CO) emissions are produced as a reaction product by the incomplete combustion of petroleum, wood and coal. The numerous sources of CO are generally small, individual sources (e.g., woodstoves, oil furnaces, boilers, etc.) which are not well controlled. Control devices on larger point sources have achieved decreases in those sectors since 1970. With the implementation of regulations requiring oxidation catalysts on automobiles, reductions in CO emissions have also been noted in the transportation sector.

A total of 1.07×10^7 t/y of CO are estimated to have been released from anthropogenic sources (Table 1). Transportation sources accounted for 66% of CO emissions on a national basis (Figure S.1). Despite the increases in the number of automobiles, the emissions estimate for 1985 has remained virtually unchanged since 1980. This reflects the effective control of CO by oxidation converters on new automobiles since 1978. The highest contributions of CO originated in Ontario and British Columbia. Generally, most urbanized areas in Canada show high CO emission densities.

The seasonal profile of CO emissions is presented in Table 2. Seasonal variation in national CO levels does appear to exist and is expected to be related to the activity level in the transportation sectors and wood waste burning.

2.5 Total Hydrocarbons

Total hydrocarbon (THC) emissions originate from evaporative losses (fugitive emissions) and from exhaust gases resulting from the incomplete combustion of fossil fuels. Evaporative losses associated with fuel storage have decreased following the increased use of floating roof storage tanks in the petroleum industry. Other evaporative losses in the marketing of petroleum are directly related to the amount of fuel sold. Total hydrocarbon emissions from transportation sources are also influenced by vehicle engine efficiency, the fuel type, and the ambient temperature. The greatest source of THC emissions is the transportation sector with 42% of the national total.

The primary concerns associated with THC emissions include the carcinogenic characteristics of some species like benzene and the hormonal effects on plants that can result from exposure to ethylene. Several THC species can also play a catalytic role in photochemical reactions within the atmosphere. Unfortunately, efficient control devices are presently not available for THC, but evaporative losses can be minimized with better containment and leakage control. Emissions from transportation sources have been reduced by higher operating standards, catalytic converters and vehicle inspection and maintenance programs.

It was estimated that 2.32×10^6 tonnes of THC were emitted in 1985. Relative source contributions are presented as pie charts in Figure S.1. Nationally, transportation sources contributed 42% of emissions, followed by 25% from industrial sources (which excludes general solvent evaporation). The combined total of THC emissions from Ontario and British Columbia accounted for half of the national total.

The low boiling points of many hydrocarbon species render THC emissions particularly temperature dependent. Seasonal increases occur with warmer temperatures but are offset by the increased use of heating fuel in the winter months. These effects are evident in the seasonal profiles compiled in Table 2. Total hydrocarbon emissions in the summer months are slightly higher (approximately 4%) compared with emissions in the winter.

2.6 Volatile Organic Compounds

Volatile Organic Compounds (VOC) consist of hydrocarbon species that can react in the atmosphere and contribute to tropospheric ozone formation and, to a lesser extent, acidic precipitation. Therefore, VOCs represent a subset of THC that exclude photochemically nonreactive compounds such as methane and ethane. The emission sources are identical to the sources discussed for THC except for coal mines which emit essentially only methane.

For 1985, it was estimated that 1.80×10^6 tonnes were emitted into the atmosphere. Volatile organic compounds represent 77% of the THC emissions in Canada. The provinces with the greatest VOC emissions are Ontario and British Columbia.

Temporal patterns associate an increase in VOC emissions with higher temperatures and with the increased use of heating fuel in winter months (Table 2). This is consistent with evaporative losses associated with petroleum storage tanks under higher ambient temperatures.

Overview of Provincial Emission Levels

Emissions are presented on a provincial basis in this section. Relative sector contributions appear in the form of pie charts for each province; further detail is provided by source type in Appendix A. The provincial ministries of the environment contribute source information for their respective province and these data are verified and completed wherever possible. Extensive information regarding point sources was compiled by the provincial ministries. Their collective efforts have produced data with greater detail and accuracy for the 1985 Emissions Inventory. Whenever the latest base year is not available, the 1980 values are used.

3.1 Newfoundland

In Newfoundland, the greatest contribution of particulate matter to the atmosphere is from the iron ore industry. Approximately 88 thousand tonnes of particulate matter are emitted by this sector (Figure 1 and Appendix A). Newfoundland's emissions of sulphur dioxide are largely due to power generation and industrial fuel combustion. For the remaining pollutants such as CO, NO_x, THC and VOC, transportation sources are predominant. Emissions of these pollutants from stationary fuel combustion are secondary in significance.

3.2 Prince Edward Island

Unlike New Brunswick and Newfoundland, the predominant source of particulate matter in Prince Edward Island is residential fuelwood combustion (Figure 2 and Appendix A). Sulphur dioxide emissions are largely attributed to commercial and residential fuel combustion for heating purposes. It is worth noting that stationary fuel combustion is the primary SO_2 source for all Atlantic provinces. Sources of NO_x, CO, THC and VOC are transportation related, and are consistent with national values.

3.3 Nova Scotia

Consistent with other Atlantic provinces, the highest particulate emissions in Nova Scotia are associated with industrial sources (Figure 3 and Appendix A). Mining and quarrying activities along with the iron and steel industry, produce the greatest TPM emissions in Nova Scotia. Sulphur dioxide emissions are largely produced by coal burning power generation facilities in the province. Oxides of nitrogen, carbon monoxide and other organic constituents such as THC and VOC, were traffic related emissions. This trend is consistent with adjacent provinces.

3.4 New Brunswick

In New Brunswick, fuel combustion from stationary sources generates the largest portion of sulphur dioxide (Figure 4 and Appendix A). In particular, power generation is a significant source of SO_2 emissions to the atmosphere. Sources of

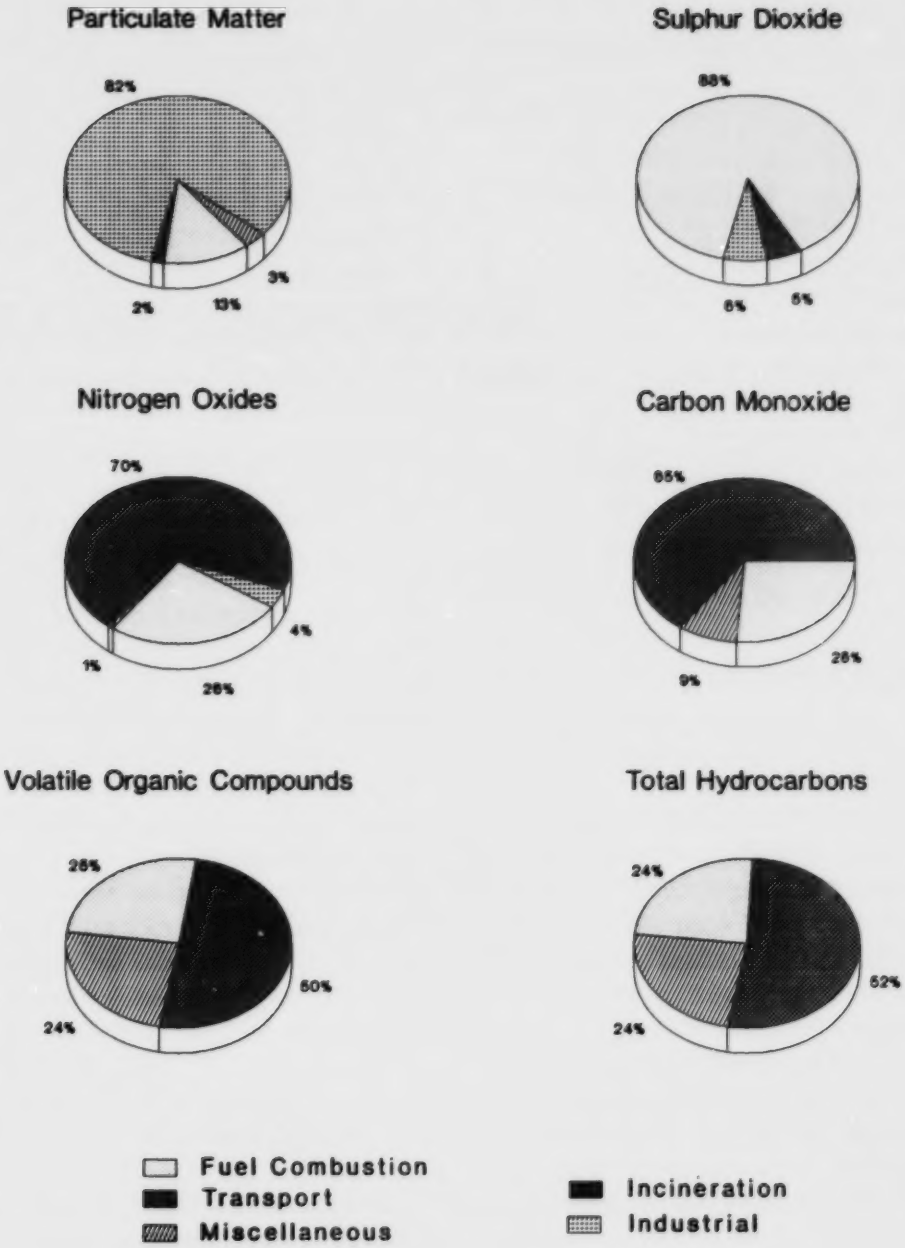

Figure 1 **Emissions by Source Category for Newfoundland (1985)**

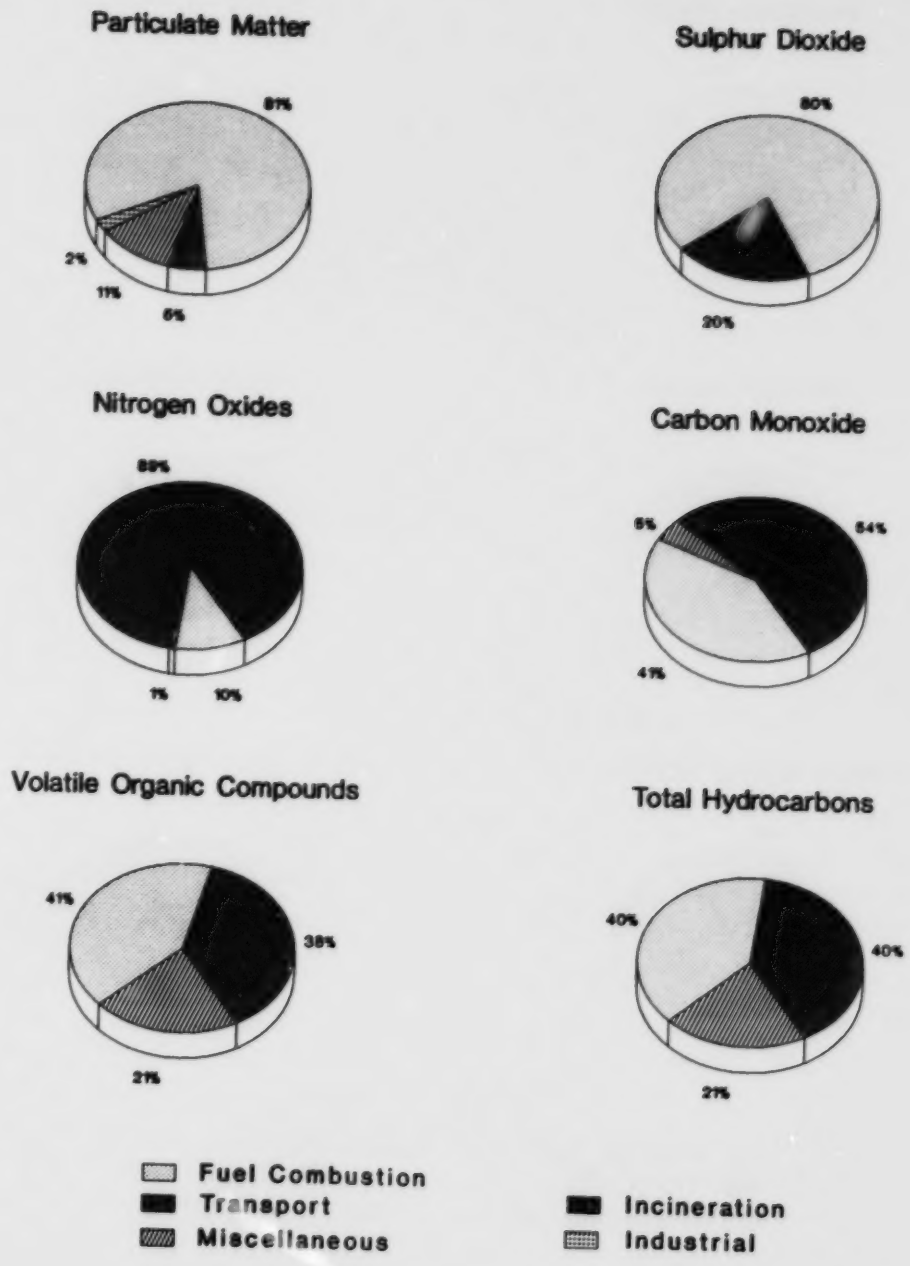

Figure 2 **Emissions by Source Category for Prince Edward Island (1985)**

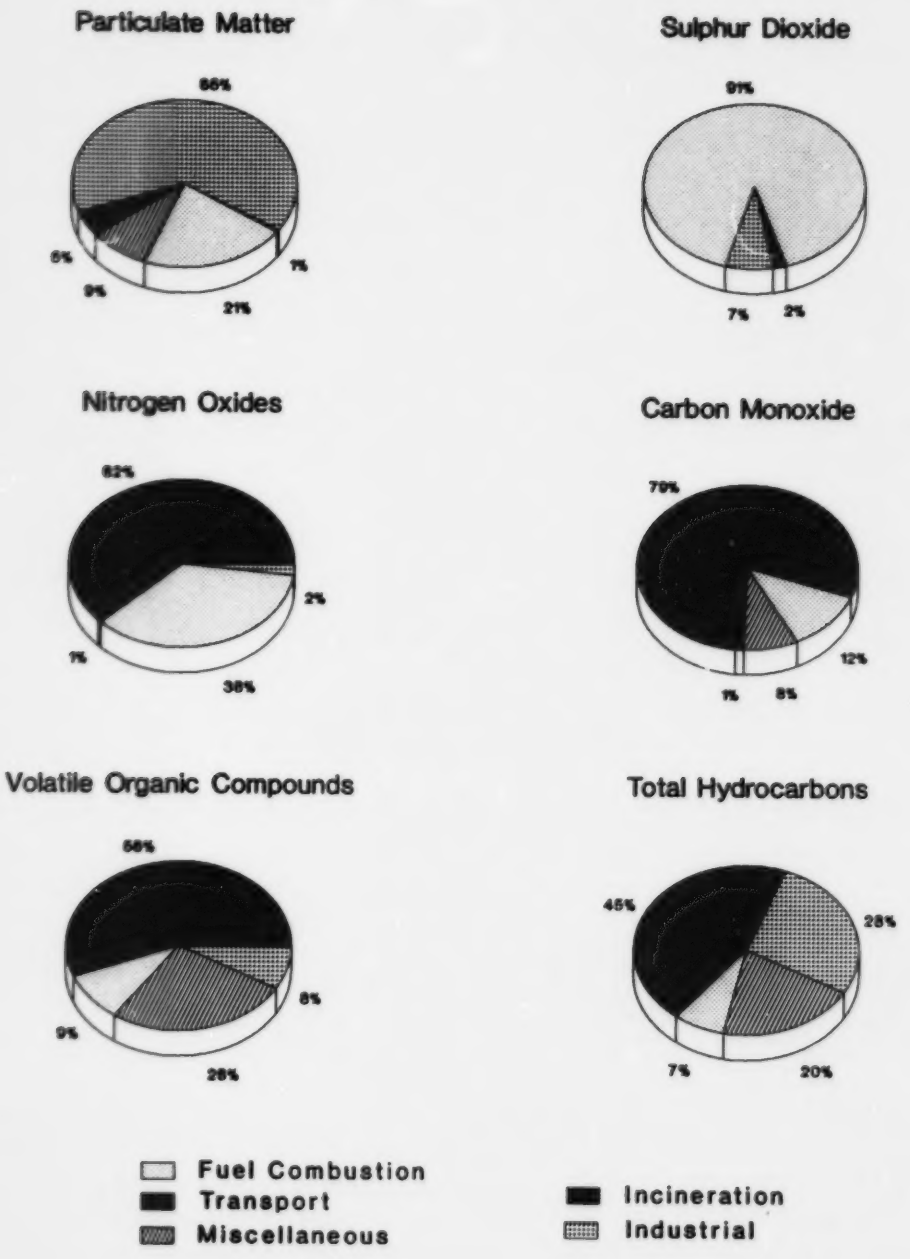

Figure 3 **Emissions by Source Category for Nova Scotia (1985)**

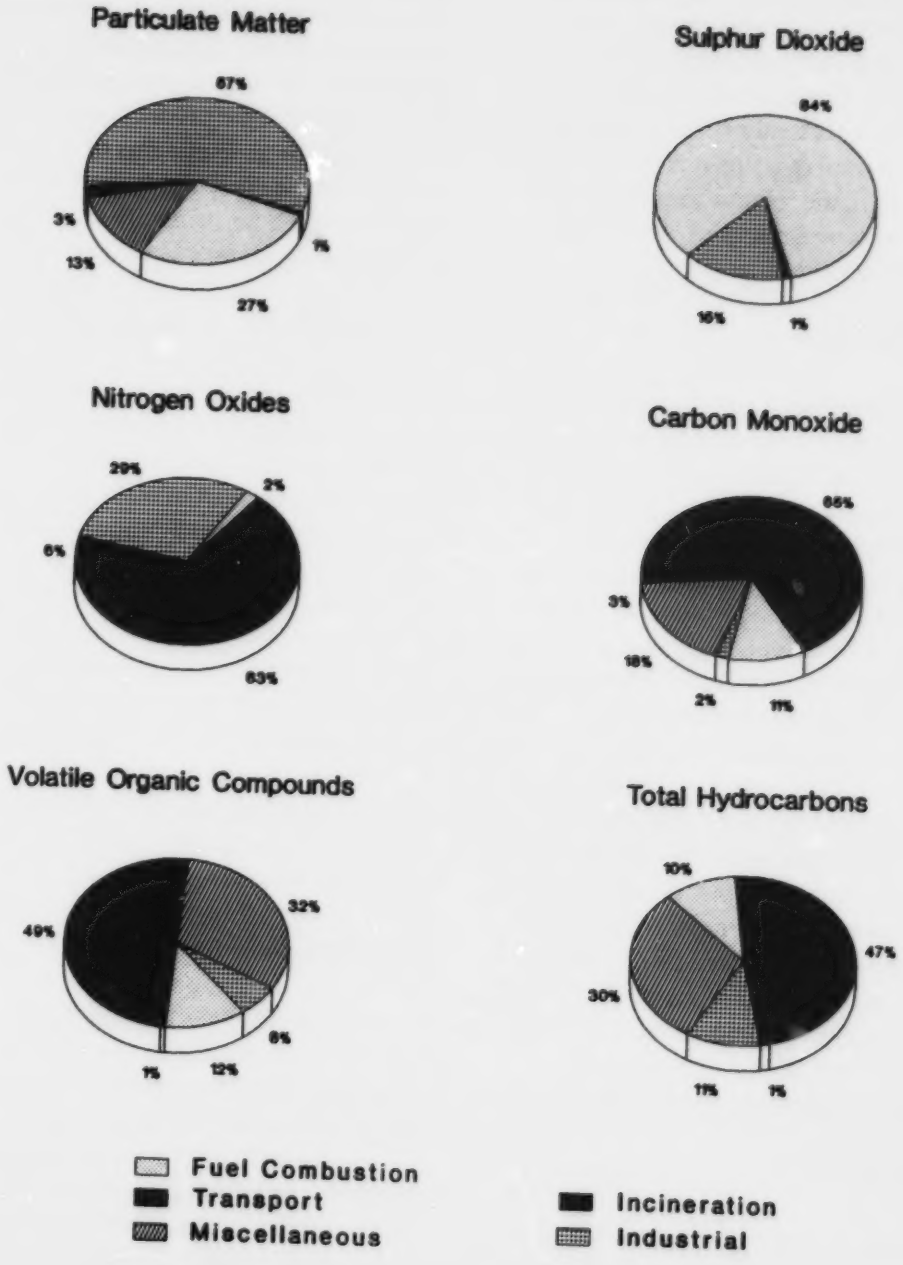

Figure 4 **Emissions by Source Category for New Brunswick (1985)**

particulate matter are generally more diffuse, with some contribution from mining and quarrying, coal production and miscellaneous industrial sources. Power plants and residential wood combustion also contribute to New Brunswick's particulate matter emissions. For the remaining pollutants (CO, NO_x, THC, VOC), the relative importance of sources in New Brunswick are consistent with national totals.

3.5 Quebec

Sources of airborne emissions in Quebec and Ontario are quite similar in most areas. The main difference between the two provinces are the extensive mining and quarrying activities that are an integral part of the Quebec economy and the thermal power generating facilities in Ontario. Mining and quarrying, fuelwood combustion and slash burning are major sources of particulate matter in the province (Figure 5 and Appendix A). Sulphur dioxide emissions are associated with industrial sources (82%), in particular copper smelting. Another significant source of SO_2 is industrial fuel combustion. Emissions of NO_x and CO are largely traffic related (80% and 61%, respectively) with gasoline powered cars ranking highest. Major sources of THC and VOC include transportation by gasoline powered cars and solvent use.

3.6 Ontario

The distinct nature of urban emission levels for both southern and northern Ontario is evident by comparison with other provinces (Figure 6 and Appendix A). This is most apparent by the sources of particulate emissions for this province. Miscellaneous sources such as fuel wood burning and slash burning are all significant sources of TPM in Ontario. Sulphur dioxide emissions are largely associated with industrial processes such as iron ore and nonferrous metals production. Another significant source of SO_2 emissions is the production of power using fossil fuels. Emissions of NO_x, CO and the organic compounds derived from THC and VOC, are primarily generated by transportation sources.

3.7 Manitoba

Emissions by sector are presented in Figure 7 and Appendix A. Sources of specific pollutants for Manitoba are distinctly different from other provinces. The largely rural nature of the province is reflected in the emission totals. This province is characterized by the predominant effects of transportation related sources. Nitrogen oxides, VOC, CO and THC emissions are all dominated by transportation sources (Figure 7). Another noteworthy feature is the effect of mining and smelting industries (copper, nickel, and zinc) on provincial SO_2 and particulate levels (Appendix A).

3.8 Saskatchewan

The relative importance of particulate sources in Saskatchewan is similar to the remaining western provinces (Figure 8 and Appendix A). Industrial sources account for 55% of provincial particulate emissions, and chemical pulping is a very significant factor in the industrial sector. Emissions of sulphur dioxide are largely associated with stationary fuel combustion (particularly power generation). Sources of CO, NO_x, THC and VOC are predominantly transportation related. Diesel powered vehicles and off-road uses

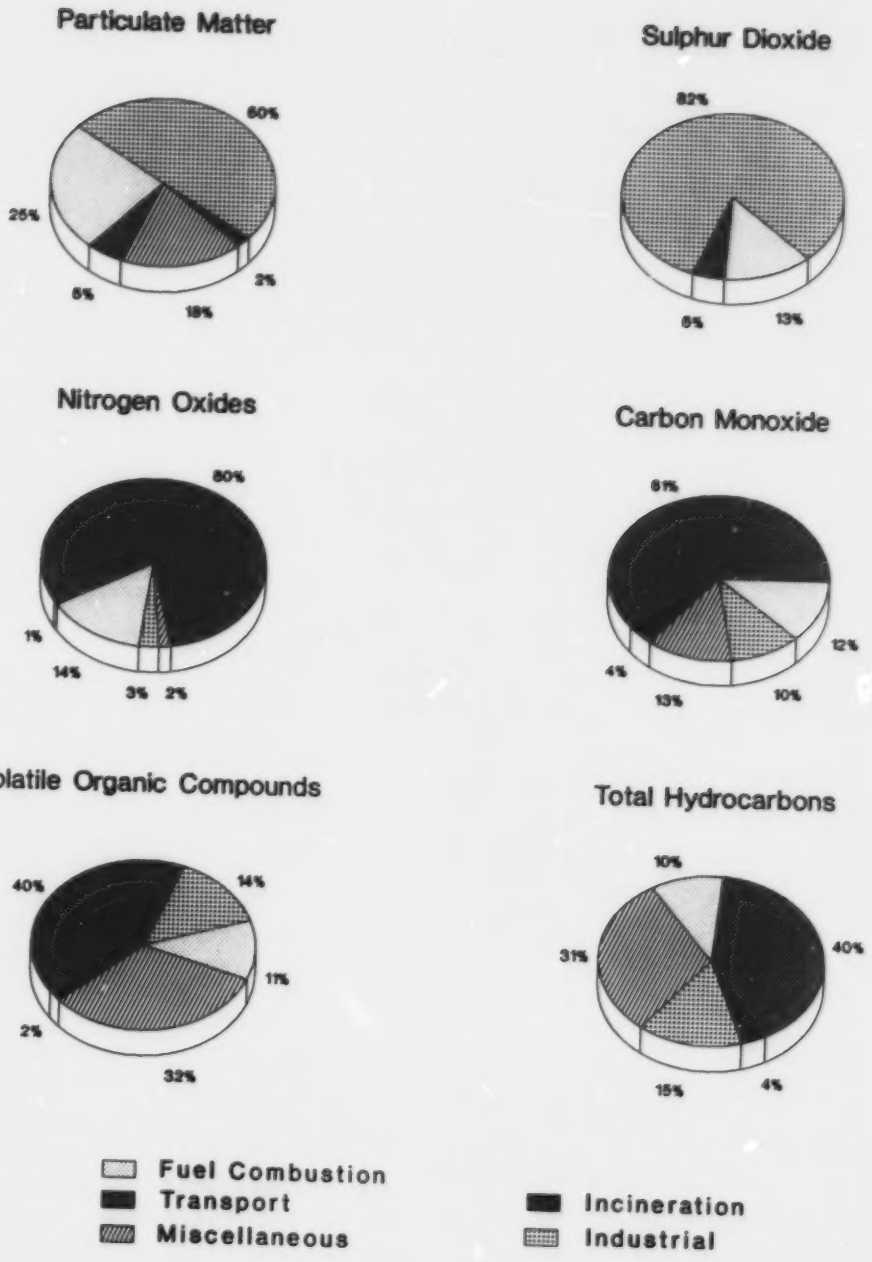

Figure 5 **Emissions by Source Category for Quebec (1985)**

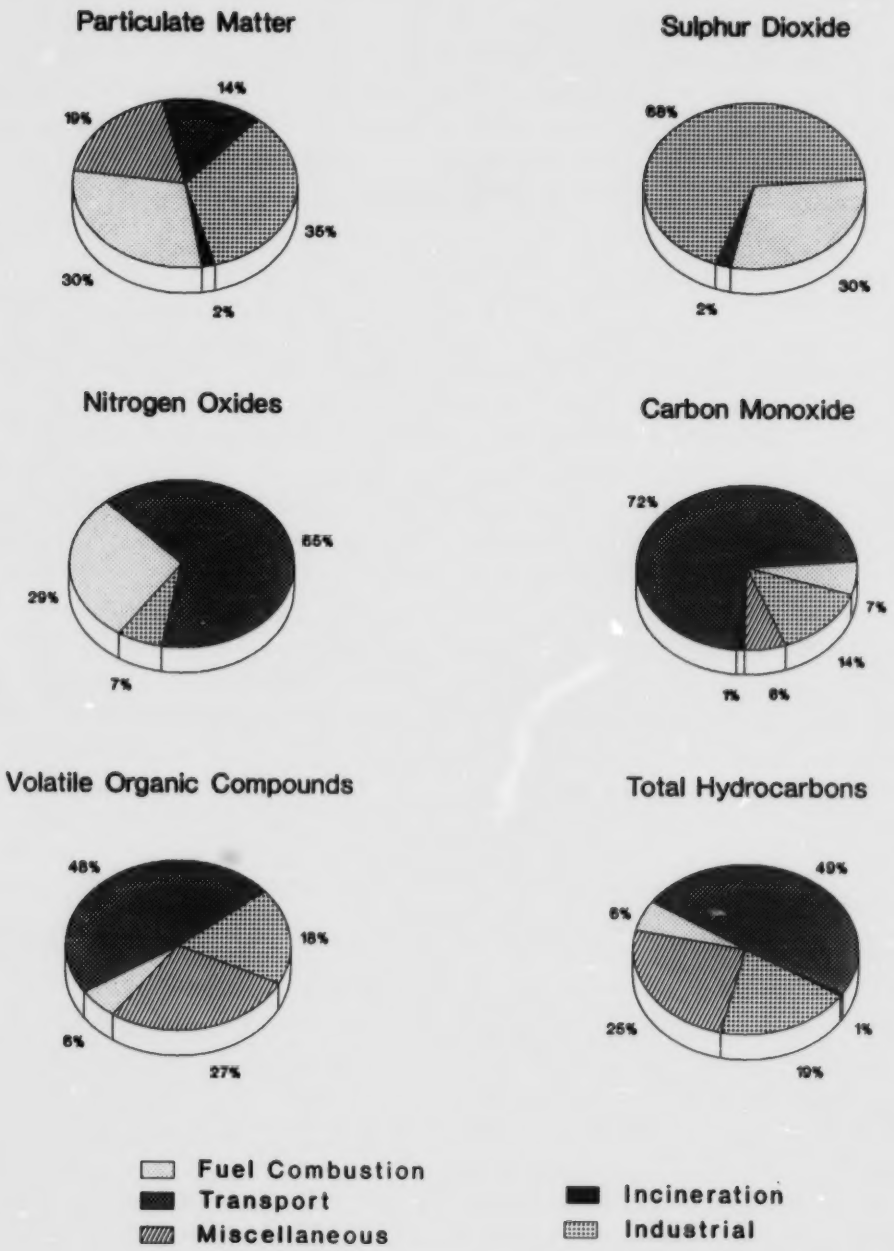

Figure 6 **Emissions by Source Category for Ontario (1985)**

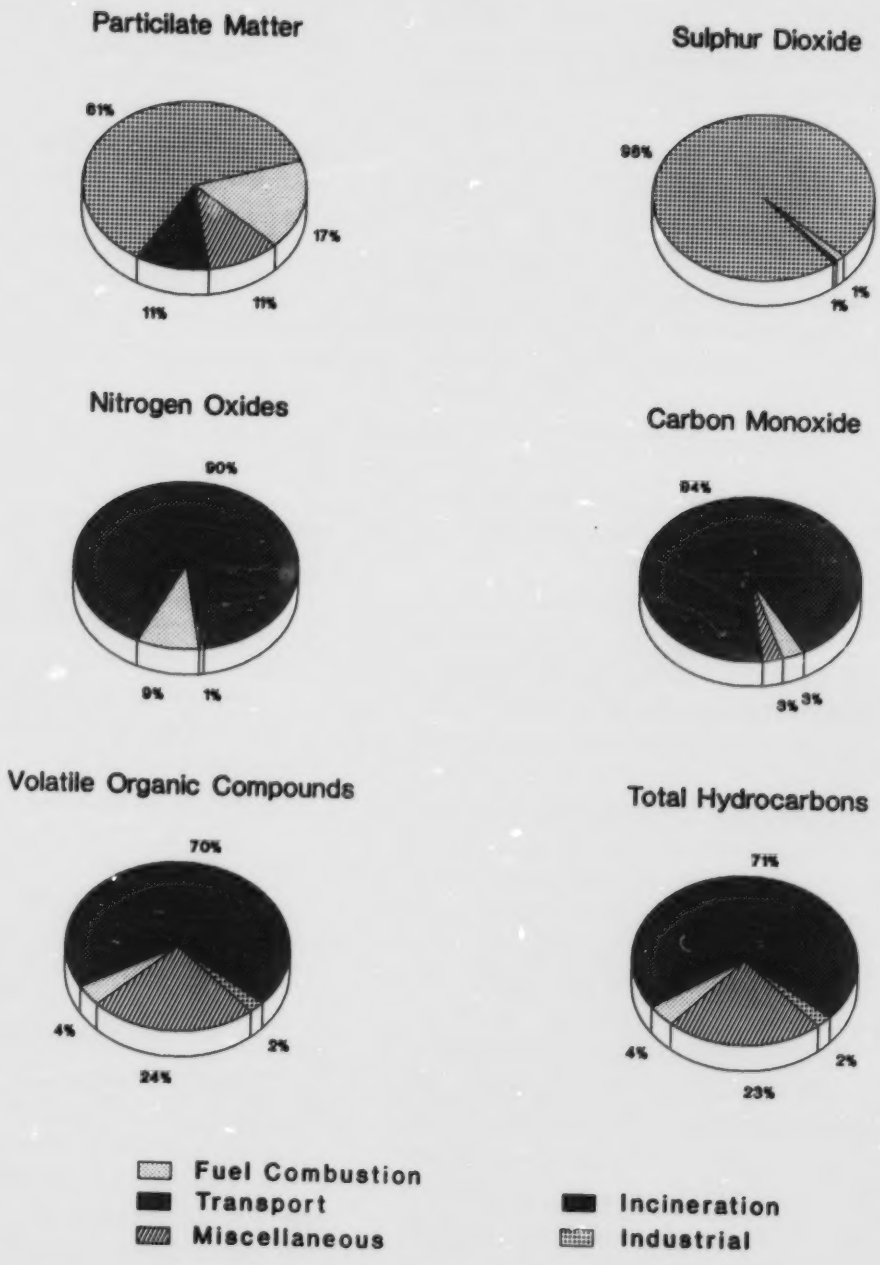

Figure 7 **Emissions by Source Category for Manitoba (1985)**

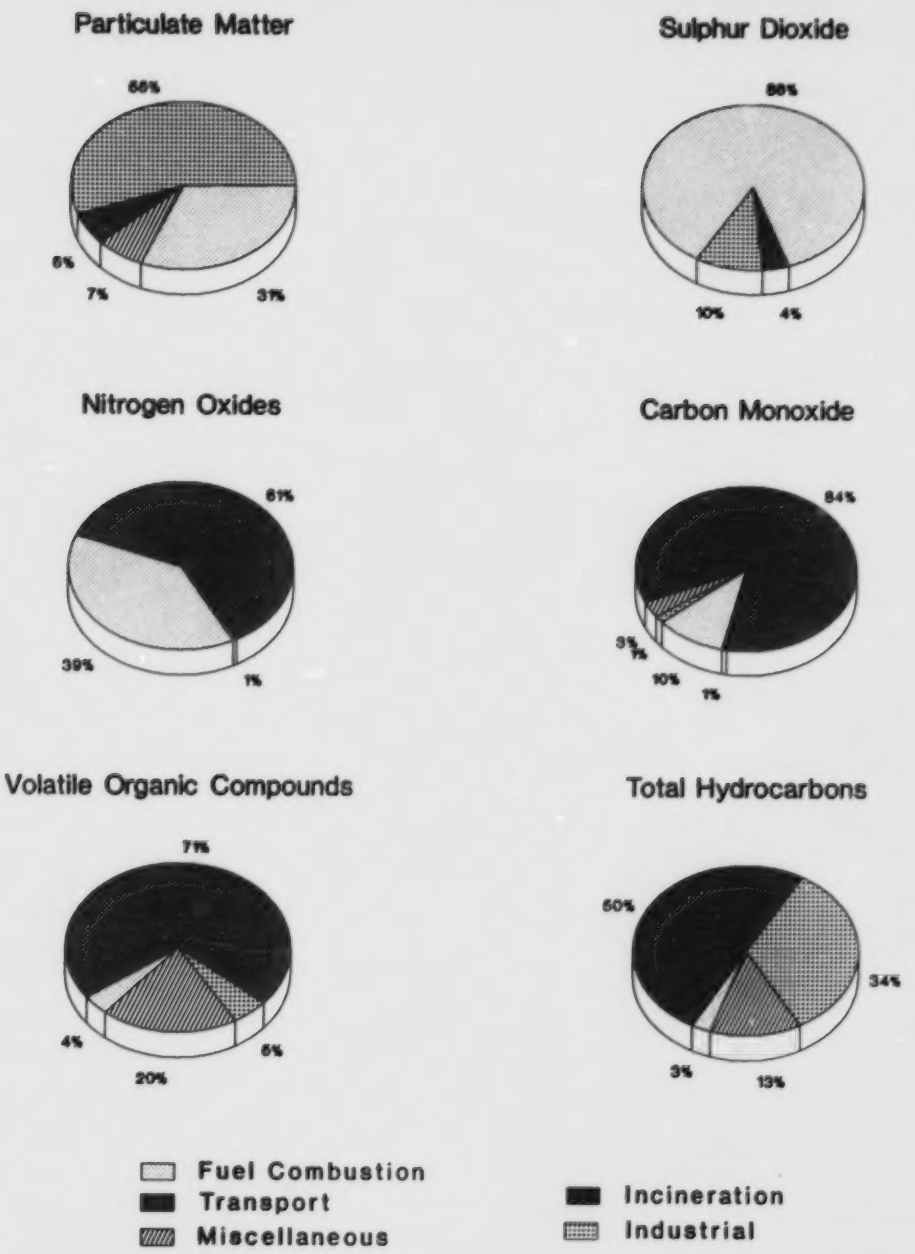

Figure 8 **Emissions by Source Category for Saskatchewan (1985)**

of gasoline are more significant emission sources in Saskatchewan than in other provinces largely due to agricultural and industrial activities.

3.9 Alberta

Annual emissions in Alberta are compared with other provinces and the national totals in Table S.1. The unusual feature of the data is the high NO_x emission total for Alberta, the second highest provincial estimate in Canada. Remaining pollutant levels are comparable with other western provinces.

Relative sector contributions for Alberta are summarized in Figure 9 and Appendix A. Industrial contributions of particulate emissions and sulphur dioxide were 63% and 83% respectively, representing the largest sectors of origin.

The salient feature of Alberta's NO_x emissions distribution is that transportation sources were of lower significance (44%) in comparison with other western provinces (British Columbia: 74%, Saskatchewan: 61%, Manitoba: 90%). Fuel combustion accounted for 50% of all NO_x emissions in Alberta.

Transportation sources accounted for the largest fraction of total VOC and CO emissions, which is consistent with other western provinces. Total hydrocarbon emissions were largely attributed to industrial sources, in particular, emissions associated with the petroleum industry.

3.10 British Columbia

After examining the provincial estimates of Figure 10 and Appendix A, it is apparent that high CO, THC and particulate emissions characterize British Columbia. Particulate emissions in British Columbia totaled 414 thousand tonnes per year. Particulate and sulphur dioxide emissions originated largely from industrial sources. Although the largest fractions of NO_x, CO and THC emissions resulted from transportation sources (Figure 10), miscellaneous sources also accounted for a substantial fraction of total emissions. The combustion of large amounts of wood waste at industrial facilities added considerably to the emissions for certain contaminants relative to other provinces.

3.11 Yukon and Northwest Territories

The number of airborne emission sources in the territories are relatively few and hence the emission results are presented collectively in Figure 11 and separately in Appendix A. Industrial sources are the main contributors to ambient particulate emissions in the territories. Of greatest significance are the particulate emissions from mining and quarrying activities. Sulphur dioxide emissions generally are associated with industrial fuel combustion. Transportation sources contribute the most to NO_x, CO, THC and VOC emissions. Within the transportation sector, emissions from gasoline-powered cars, light-duty trucks, and heavy-duty diesel powered trucks contribute to the greatest portion of airborne pollution.

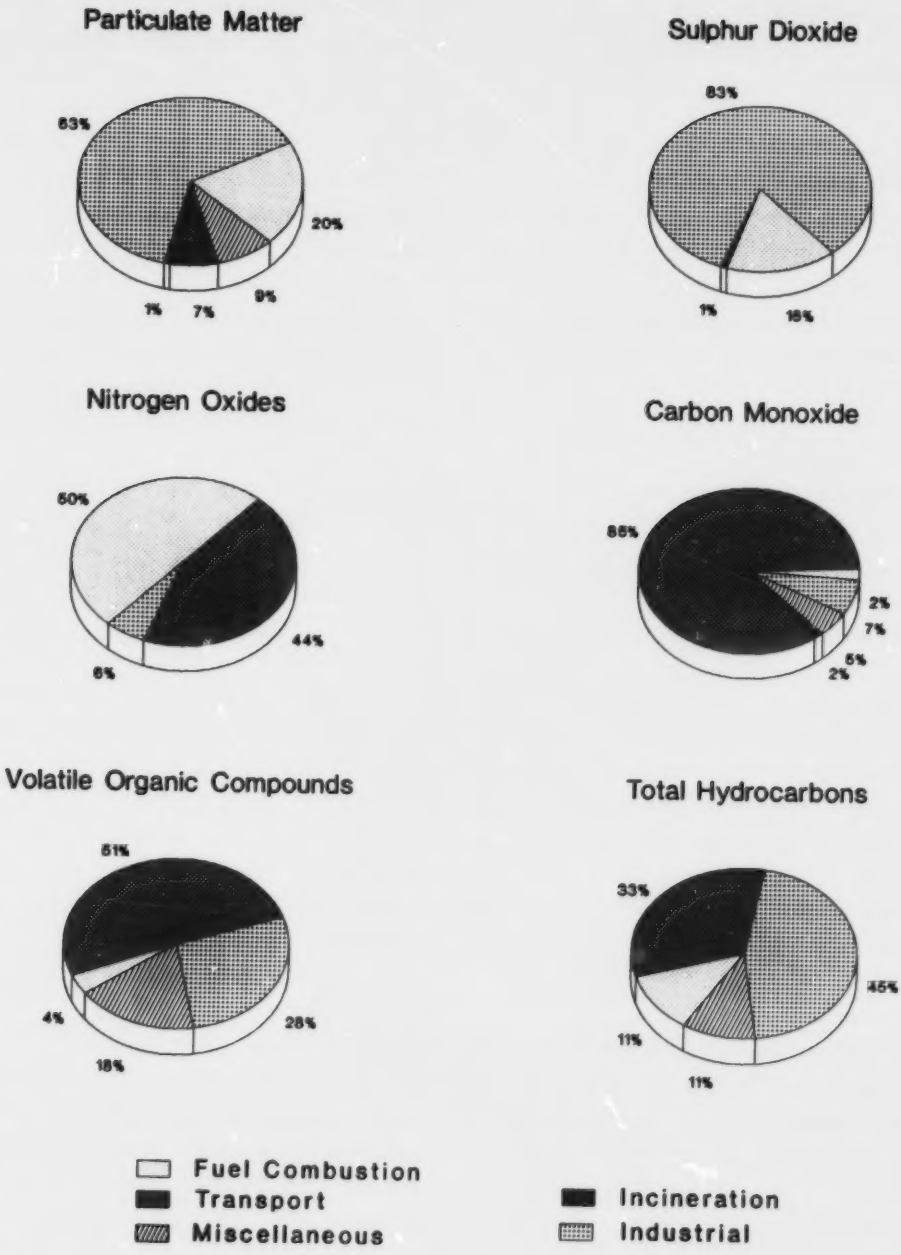

Figure 9 **Emissions by Source Category for Alberta (1985)**

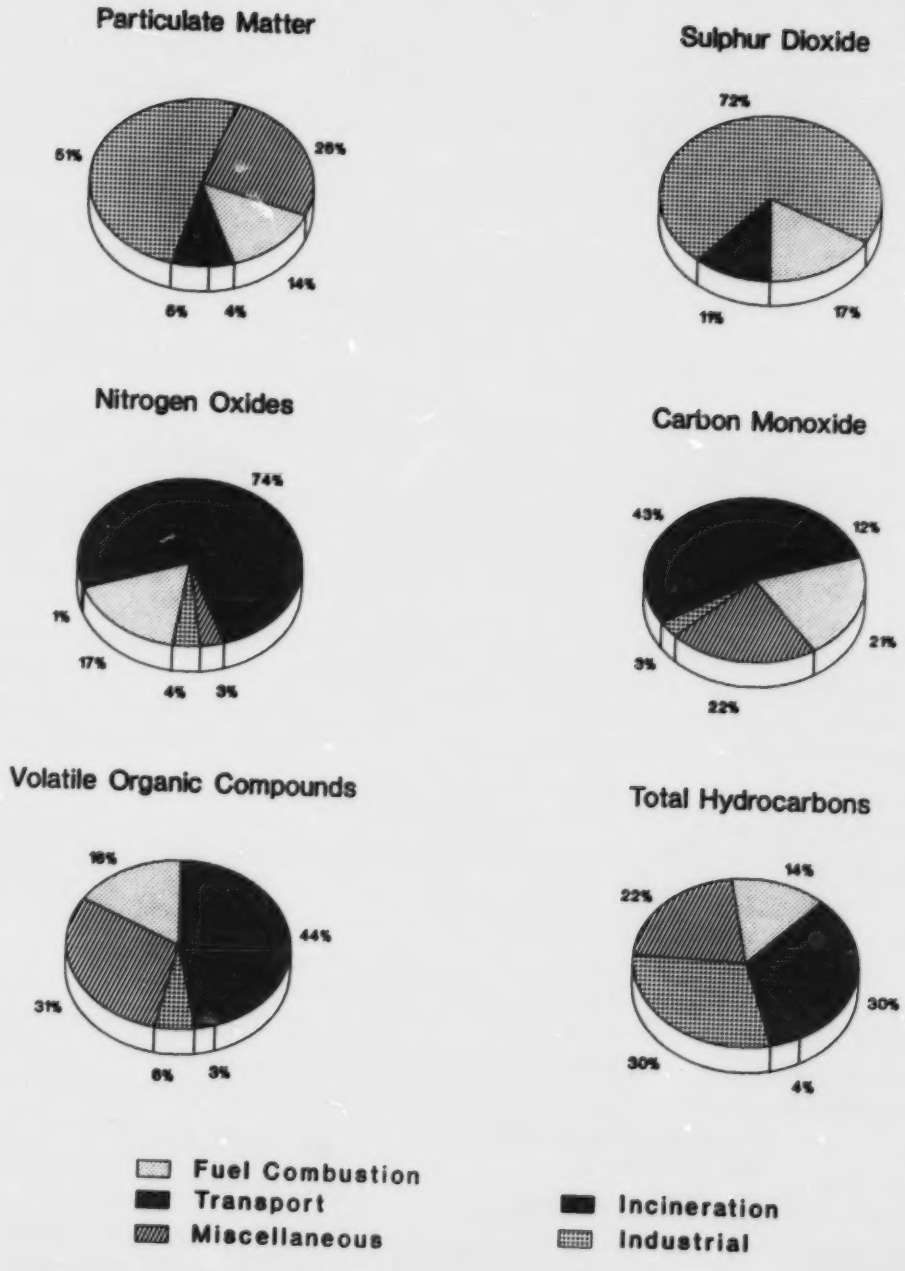

Figure 10 **Emissions by Source Category for British Columbia (1985)**

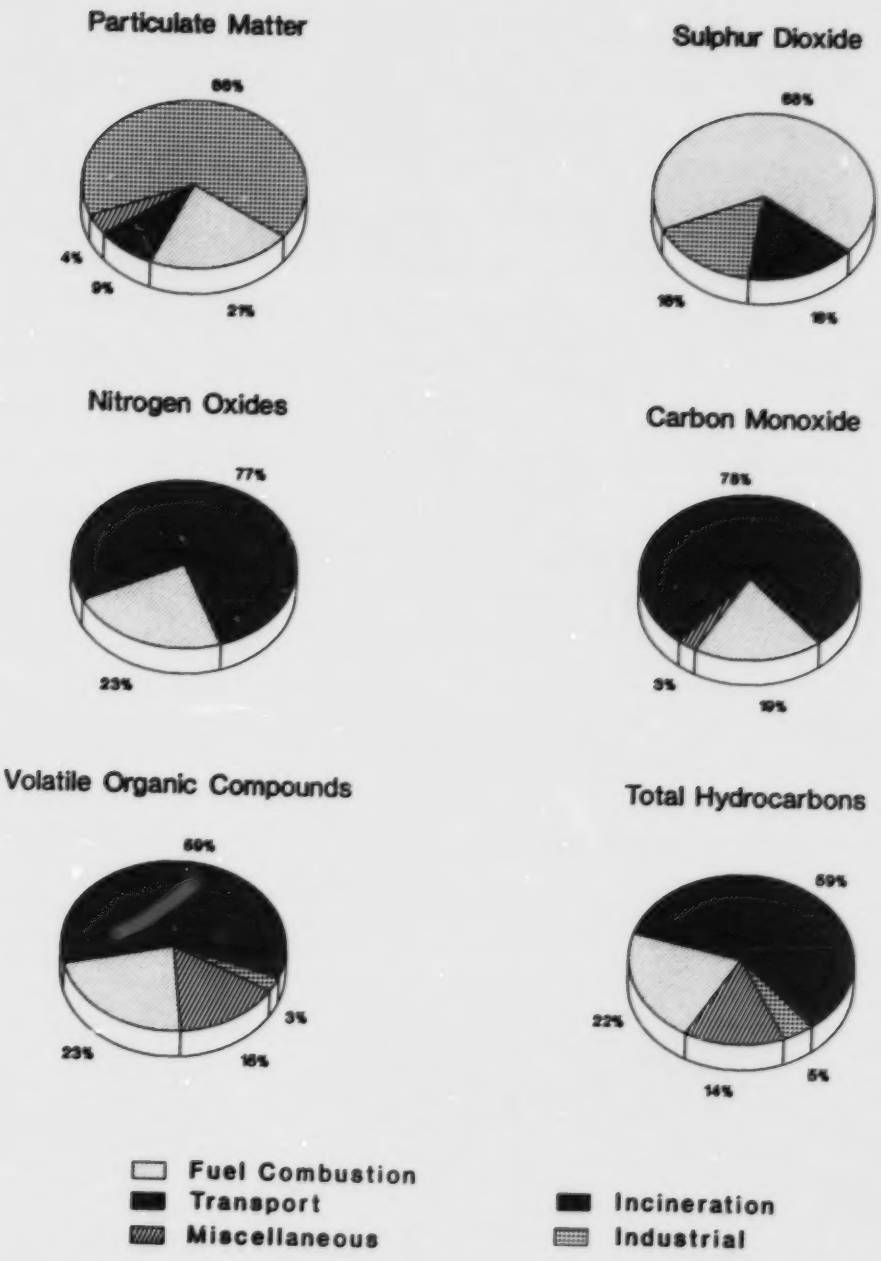

Figure 11 **Emissions by Source Category for the Yukon and Northwest Territories (1985)**

Compilation of Emissions

The process of acquiring and calculating emissions from each source type is described in this section. In the following section, a general overview of the methodology used in an emissions inventory is presented. Emissions from similar sources are often estimated by using parallel methods. Therefore, similar sources are discussed collectively in the sections to follow.

4.1 Calculation of Emissions

Basically, the calculation of emissions from a source requires information regarding:

1. process discharge quantities and characteristics,
2. activity levels and variations in activity level,
3. control technologies employed and their efficiencies, and
4. physical characteristics influencing the discharge.

The actual annual discharge from a source is generally not available. Therefore, the discharge is estimated by relating the activity level to the emissions generated by this activity per unit activity (emission rate). The annual emissions can be obtained by adjusting direct measurement of the source (i.e. stack testing) to an annual value such as a product input or product. An example of a process input is the amount of fuel expended per unit time to generate a known quantity (capacity) of power for a thermal power generation process. An example of a process product is the amount of energy produced. This value that relates the activity to the discharge is known as the base quantity. The base quantity is then used to estimate the actual discharge by applying an emission factor. The general method of estimating the actual discharge is:

Discharge = base quantity x emission rate

In the event that control technology is employed to reduce emissions and hence the emission rate, its efficiency must be known. This factor is then applied to determine the actual rate of emission.

Discharge = base quantity
x uncontrolled emission rate
x [100 - efficiency(%) ÷ 100]

The discharge can be defined in greater detail both temporally and spatially. Further information on the activity level as a function of time allows for the calculation of the discharge at a certain time. This would be made possible by accounting for seasonal, daily and diurnal variations in the activity level. Within the 1985 Emissions Inventory, the temporal resolution is achieved by attributing the total annual discharge to:

1. monthly activity fractions,
2. day of week activity fractions, and
3. hourly activity fractions.

Table 3 Area Source Proration Parameters

Area Source	Proration Parameter
Industrial	
Coal industry	Mining labour force
Sand and gravel processing	Population
Iron ore mining and beneficiation	Mining labour force
Asphalt production	Population
Stone processing	Population
Grain handling	Agricultural labour force
Grain milling	Agricultural labour force
Ferrous foundries	Industrial labour force
Crude oil production	Mining Labour force
Mining and rock quarrying	Mining labour force
Concrete batching	Population
Fuel Combustion (stationary sources)	
Residential	Residential dwelling units - (gas/oil)
Commercial	Commercial labour force
Industrial	Industrial labour force
Power Generation	Population
Transportation	
Highway gasoline powered vehicles	Population
Off-highway use of gasoline	Population
Diesel powered vehicles	Population
Tire wear	Population
Aircraft	Population
Railroads	Population
Marine	Population
Incineration	
Commercial and industrial	Population
Wigwam burners	Agricultural Labour force
Miscellaneous	
Slash burning	Agricultural Labour force
Structural fires	Residential dwelling units
Fertilizer application	Agricultural Labour force
Dry cleaning	Population
Gasoline and diesel marketing	Population
Application of surface coating	Population
Cigarette smoking	Population
Pesticide application	Agricultural Labour force

These factors may be applied to an annual discharge estimate successively in order to obtain discharge quantities with the desired temporal resolution.

The spatial resolution of point sources is usually estimated to the nearest kilometre, and is based on the spherical coordinate system. For sources that are not stationary or which cannot be defined in terms of these coordinates, other means of attributing the total emissions to a geographical location are necessary. Proration factors derived from surrogate variables are used to apportion emissions to geographical locations (or grids) as outlined in Table 3. The proration factors are generally based on the most appropriate and available statistic. Statistics Canada compiles a variety of such statistics through the census process and survey protocols. If necessary, information on industrial processes are solicited directly.

The methods of estimating emissions used in this inventory and their relative frequency of use have been summarized for each major sector in Figure 12 and Table 4. It is readily apparent that the majority of the emission estimates are based on emission calculations that employ standard NAPAP emission factors (NAPAP, 1987).

4.2 Methods of Emissions Calculation by Source Category

Five categories of sources are defined for reporting purposes, namely:

- industrial processes,
- stationary fuel combustion,
- mobile fuel combustion,
- solid waste incineration, and
- miscellaneous.

The calculation of the main source categories are described in the following subsections.

4.2.1 Industrial Processes.

The category of industrial processes encompasses most point sources emitting 100 tonnes per year or more of the parameters inventoried. Small sources are included as area sources. This broad category can be further subdivided into:

- ferrous industries,
- nonferrous smelters,
- mining and mineral processing,
- wood and paper industry,
- fossil fuel production,
- chemical industries, and
- other manufacturing industries.

Table 4 Emission Calculation Methods

Method No. 1	Emissions based on source testing or other emission measurements.
Method No. 2	Emissions based on material balance using engineering expertise and knowledge.
Method No. 3	Emissions based on computer calculation employing standard emission factors (NAPAP, 1987).
Method No. 4	Engineering estimate.
Method No. 5	Emissions calculated using emission factors other than NAPAP, 1987.

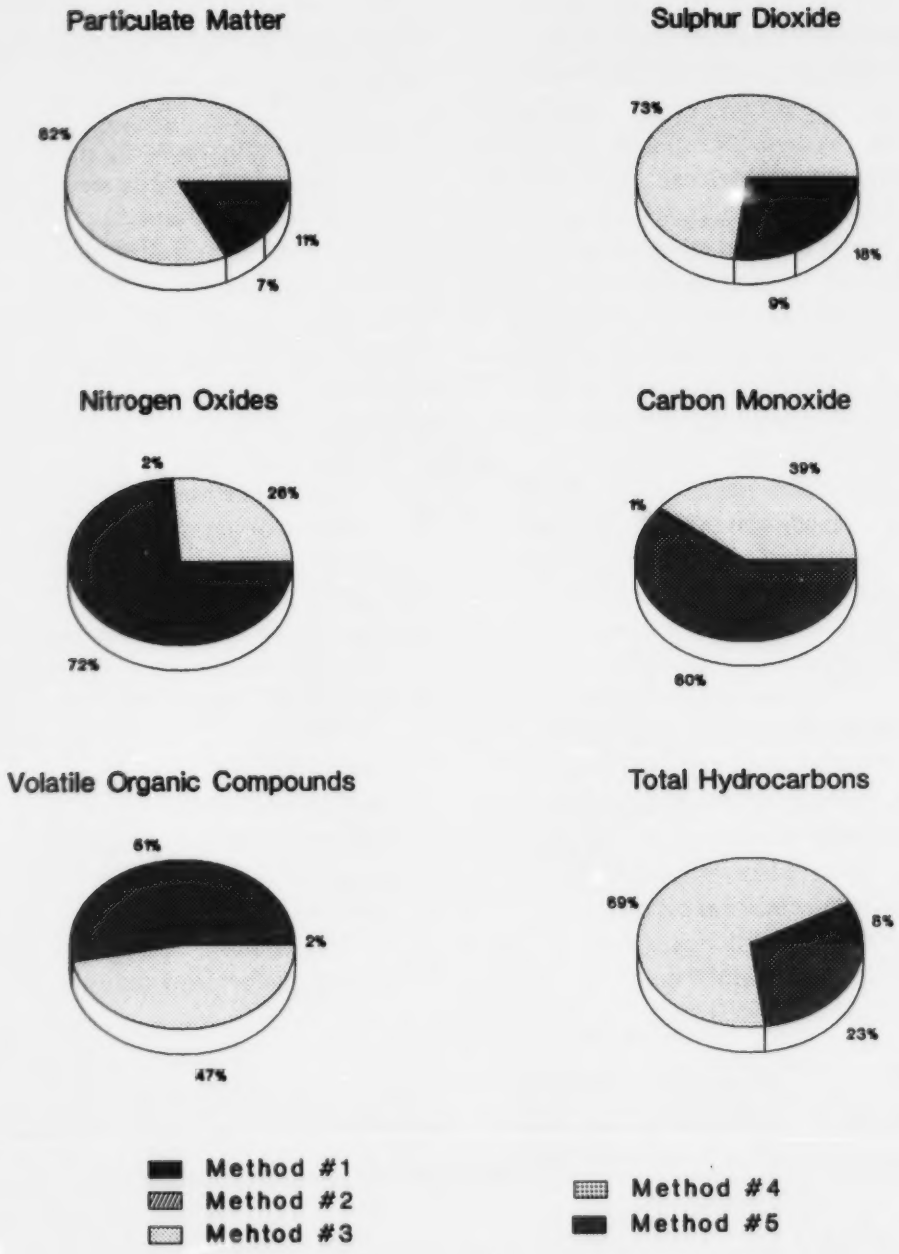

Figure 12 Emission Calculation Methods

Data regarding industrial processes represent the largest part of the emissions database, and hence are of the utmost importance to the inventory process. The majority of this information was provided by the provincial ministries. A complete listing of reports for provincial data inputs is presented separately in the Reference Section. Other sources of information are specifically referenced in the appropriate subsections.

Ferrous Industries refer to all processes from the initial mining of iron ore to the manufacture of finished ferro-alloy products. Specifically, the following sectors are included in this subcategory:

- iron ore mining and beneficiation,
- ferrous foundries,
- iron and steel production, and
- ferro-alloys production.

Direct emissions information, activity levels and control device data were provided by the provincial ministries and Energy Mines and Resources [3,4,5]. When environmental release data were not available for a ferrous operation, emissions were estimated using production figures obtained from various sources such as: the Canadian Foundry Association, the Industrial Programs Branch of Environment Canada, Statistics Canada, and Energy, Mines and Resources. These estimates were also made in conjunction with EPA emission factors or emission rates developed specifically for each site [6]. Control efficiencies were assumed to be the same as in the 1980 emissions inventory unless specifically reported by the provincial ministries.

Nonferrous Smelting is the smelting of metals other than iron. The sectors that have been addressed in the context of the 1985 Emissions Inventory for this subcategory are:

- gold roasting,
- aluminum production,
- lead/zinc production,
- copper/nickel production, and
- pyrrhotite roasting.

While direct emissions data were given preference, most frequently such information was only available for SO_2 (provincial agencies). In other instances emissions were estimated by using production information and mass balances for SO_2 and other data obtained from internal studies by Environment Canada [7, 8, 9, 10, 11]. For smaller smelting operations, site specific process information was used in conjunction with emission factors [12, 13, 14, 15, 16, 17, 18].

Mining and mineral processing includes all remaining mining activities as well as the processing of these varied materials. The type of emissions associated with these activities range from actual process emissions, to storage-related emissions. Storage-related emissions are associated with the movement and storage of raw materials such as limestone and products such as lime. This subcategory consists of:

- mining and rock quarrying,
- sand and gravel processing,
- asbestos production,
- lime manufacturing,
- potash processing,
- stone processing,

- silica processing,
- salt production,
- gypsum processing, and
- nepheline syenite processing.

Limited stack testing data were available from provincial agencies and such measurements were only used for sectors such as potash processing and asbestos production. Specific information on the emission sources for the remaining activities examined in this grouping was incomplete. Hence, emissions from these sources were estimated from provincial production figures. Such information was obtained from Energy Mines and Resources, and Statistics Canada [19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32]. The emission rates were obtained from the U.S. Environmental Protection Agency [33] unless specific Canadian data were available [8].

Wood and Paper Industry. The processing of wood derived products are included in this subcategory. The sectors that are compiled in this inventory are:

- sulphite pulping,
- sawmills,
- sulphate (Kraft) pulping, and
- plywood and veneer manufacture.

For pulping plants, provincial agencies provided site-specific information for these processes whenever possible. Little information was available for the remaining sectors in this grouping. The main reasons for the lack of direct emissions testing data are the smaller size of the plants and the assumption that the emissions are relatively low. Emission estimates, therefore, were calculated using the standard U.S. EPA emission factors [33] in conjunction with the most appropriate statistics that related to production levels. British Columbia has compiled accurate data on all the significant forestry sectors since it is a major component of the provincial economy. As a result, the emission estimates are considered to be significantly more accurate.

Shipment figures for the logging industry and the products generated were obtained on a provincial basis from Statistics Canada [34, 35, 36] and were used in the estimation of sawmill activity, pulpwood manufacturing, and plywood and veneer manufacturing. For sulphate and sulphite pulping, production figures were obtained as part of data provided by the provincial agencies.

Fossil Fuel Production includes the processing of oil, natural gas, and coal for the production of various fuels.

Relevant industries addressed were:

- crude oil production,
- natural gas processing,
- coal industry,
- petroleum refining,
- tar sands operations, and
- metallurgical coke production.

In addition to SO_2 and particulate matter, the production of fossil fuels produces emissions of NO_x and a vast range of organic constituents. In the 1980 emissions inventory, organic emissions were only reported collectively as total hydrocarbons (THC). Volatile organic compounds (VOC) were added in this update because of their importance to tropospheric ozone.

The emissions from crude oil production are created by a number of stages in the process that include oil extraction, marine handling, storage tank losses, transfer operations for crude oil and sour oil batteries. Stack testing data were available from provincial files for major sources. These data were employed whenever possible. Otherwise, crude oil production figures from Statistics Canada were used in the estimation of emissions [37]. Information on emissions associated with marine handling and transfer operations is generally not available. Emissions for these activities were estimated using import quantities obtained from Statistics Canada [38,39]. Emissions from petroleum refineries, including evaporative losses from storage, were estimated on a plant by plant basis using standard U.S. EPA emission factors in conjunction with PACE data [40].

Plant-specific information for the natural gas industry was obtained directly from Alberta Environment; other reports from the Energy Resource Conservation Board (ERCB) were also used as a reference [41,42]. Additional plant-specific information regarding: emission estimates, the amount of raw gas processed, fuel gas employed, flaring operations and sulphur recovery operations was also obtained. All other information regarding production and/or plant capacity was obtained from Statistics Canada [37]. This information was used in conjunction with U.S. EPA emission factors [33].

Tar sands operations are a unique sector of fossil fuel production in Canada. Emissions data for this sector were obtained from Alberta and other Canadian studies [10,43,44].

In the production of coal for use as a combustion fuel, emissions from coal cleaning, mining and transportation were considered. Unfortunately, emissions from these sources are not readily measured, so they were estimated by using the quantities of coal mined [45], internal coal handling and transportation statistics [46,47].

The emissions from the production of coke for subsequent use in the metallurgical industry were supplied by provincial ministries or were in most cases estimated from annual production quantities compiled by Energy, Mines and Resources [45] and data developed by Environment Canada and the U.S. EPA [48,33].

Chemical Industry. The various industries involved in the production of specific chemicals for both industrial and commercial use, are included in this subcategory. Specifically, it includes the production of:

- phosphoric acid,
- nitric acid,
- phosphate fertilizers,
- phosphate rock (processing),
- petrochemicals,
- sulphuric acid,
- nitrate fertilizers,
- elemental phosphorus,
- ammonium sulphate, and
- carbon black.

Process statistics and actual emissions information were available for certain pollutants from the provincial agencies especially for larger plants, and these data were used in conjunction with U.S. EPA emission factors to calculate annual emissions for all pollutants of concern.

For plants where this type of information was not available, production quantities were obtained from Energy, Mines and Resources, or internal surveys [49,50]. Production processes involving sulphuric acid and nitric acid production typically lacked actual emissions information. As in the estimation of emissions from other sectors, U.S. EPA emission factors were employed [33,51].

Other Manufacturing industries that have not been included in previous subgroupings are collectively addressed in the subcategory of other manufacturing. Sectors relevant to Canadian industry are:

- abrasives industry,
- concrete batching,
- glass manufacturing,
- clay products,
- cement production,
- asphalt production,
- pigments production,
- bakeries,
- grain handling and milling,
- plastics fabrication, and
- magnesium production.

Few direct measurements of emissions existed for these various manufacturing industries with the exception of cement and concrete batching plants where some provincial data were supplied. Alternatively, production figures or plant capacities were used to estimate annual emissions. For most sectors, these data were obtained from Statistics Canada publications [53,54,55,56,57,58,59,60]. Another source of values was Energy, Mines and Resources [31,61,62]. Production figures used to estimate emissions from the production of pigments were also obtained [63].

Control efficiencies were estimated based on the process and control device type. Standard U.S. EPA and Environment Canada emission factors were used in the calculations [33,50,64].

4.2.2 Fuel Combustion at Stationary Sources.

The combustion of fossil fuels from sources other than transportation sources are addressed in this grouping. Specifically, stationary combustion sources comprise:

- electric power generation,
- residential fuel combustion,
- commercial fuel combustion,
- industrial fuel combustion, and
- fuel wood combustion.

Aside from larger electric power plants, these sources are generally uncontrolled. Direct measurement of emissions is impractical and therefore emissions were estimated indirectly by fuel consumption figures. Some values are submitted regularly to Environment Canada for electric power generation [65]. Emissions data for the utilities was provided by the provincial ministries and internal surveys [46, 66]. For the other sources such as residential fuel combustion, commercial and industrial fuel combustion and fuel wood combustion, fuel consumption data were obtained on a provincial basis from Statistics Canada [34,67]. Emission factors were obtained from the U.S. EPA and Environment Canada [33,51,68]. The resulting emissions were apportioned to each area using appropriate proration statistics.
Information on fuel characteristics such as sulphur content were obtained for each region and were employed in conjunction with U.S. EPA emission factors [69].

4.2.3 Transportation.

Generally, transportation sources include all emissions associated with mobile sources powered by internal combustion engines. The emissions associated with mobile sources encompass exhaust and evaporative emissions and tire wear. The types of mobile sources included in this category are:

- gasoline-powered road vehicles,
- diesel-powered vehicles,
- railroads,
- marine vessels,
- aircraft,
- off-road use of gasoline, and
- tire wear.

The estimation of emissions for mobile sources is complicated by several factors; individual activity levels are generally unknown, the location of the mobile sources are not fixed geographically, and operating/control conditions are not known for individual sources.

For vehicular sources, the number of vehicles of each type was obtained from licence registration figures compiled by Statistics Canada [70]. The activity levels were estimated assuming an average number of vehicle - miles travelled per year per vehicle type. Operational variables affecting emissions from vehicles such as the use of catalytic control devices and climatic differences [47] were incorporated into the calculation of emissions using a portable computerized system developed by the U.S. EPA for road transportation sources known as 'MOBILE 3'.

This method of estimation was employed for all gasoline-powered and diesel-powered road vehicles. Tire wear was calculated using the same statistics and was based on total vehicle miles travelled. The emissions were calculated using the findings in a published study [71].

Fuel sales were used to estimate emissions for railroads, off-road uses of gasoline for agricultural equipment and power tools as well as off-road uses of diesel fuel typically used for construction purposes and other heavy-duty equipment. The fuel sales quantities were obtained from Statistics Canada [67, 72] and were used in conjunction with U.S. EPA emission factors [51].

Emissions from larger marine sources such as steam motor ships entail fuel combustion for electrical power generation and for steam generation or motor power. The level of emissions was estimated using the recorded number of calls by ships at ports surveyed by Statistics Canada [39, 38]. An average layover in port of 1.66 days was assumed by the National Harbours Board and U.S. EPA emission factors were applied to estimate emission levels for ships [51].

Information on smaller marine craft such as outboards and other pleasure craft was limited to the number of boats owned. These data are recorded by Statistics Canada, as part of a sample survey taken each year [73]. The United States EPA emission factors were applied which assume an average activity level of 50 hours per year at an average produced power of 9.1 horsepower in the calculation of emissions [51].

In the calculation of emissions for aircraft, inflight emissions as well as emissions from landing, taxiing, takeoff and climbout were considered. Transport

Canada provided information on the number of landing and takeoff (LTO) cycles for each airport by aircraft type [74, 75]. These figures were used with U.S. EPA emission factors to estimate emissions from such procedures at airports [51]. For inflight emissions, flight times obtained from Transport Canada and Statistics Canada were used to estimate emissions [74, 76]. These were combined with information on engine type and EPA emission factors for cruising conditions [51].

4.2.4 Solid Waste Incineration.
The sectors addressed in solid waste incineration are:

- municipal incineration,
- industrial and commercial incineration,
- sewage sludge incineration, and
- wigwam burners.

Since most solid waste incinerators are relatively small, uncontrolled sources that are geographically dispersed, stack measurements of their emissions are not made. Other statistics relating to their activity level are also unavailable in most cases. The exceptions are larger municipal incinerators and sewage sludge incinerators. Municipalities and provincial agencies compile annual throughput data from these facilities. The data obtained from provincial ministries were used in conjunction with U.S. EPA emission factors to estimate emissions from these two sectors [51].

Due to a lack of information, emissions from industrial and commercial incineration were calculated indirectly. This was achieved by relating the emissions from this sector to municipal incineration and by applying a ratio developed by the U.S. EPA. A ratio of nine tonnes of industrial and commercial incineration to 16.6 tonnes of municipal waste was used to estimate the emissions from incineration. At the same time, it was assumed that 75% of the waste was treated in multiple chamber type incinerators while the remaining incinerators were of the controlled air type [77]. The emission factors were taken from the U.S. EPA [51].

Emissions from the burning of waste wood were also derived indirectly. Production figures for the logging industry were available from Statistics Canada [78]. For this inventory, these values were applied to an assumed percentage of waste to estimate the amount of waste wood burned. These estimates were then used with the NAPAP emission factors [33] since wigwam burners are seldom monitored for emissions in Canada.

4.2.5 Miscellaneous Sources.
A variety of other common pollutant sources have been grouped together as miscellaneous sources. All of these source emissions were estimated by using the area source approach. The sectors that were addressed in the 1985 Emissions Inventory are:

- fertilizer application,
- pesticide manufacturing and application,
- gasoline and diesel marketing,
- dry cleaning,
- application of surface coatings,
- structural fires,
- cigarette smoking,
- general solvent use, and
- slash burning.

For all product use and application sectors, some statistics on product sales are available from Statistics Canada [57, 79, 80]. Census statistics were used for sector activities that were based on population (i.e., cigarette smoking, dry cleaning) [81]. In addition to solvent sales figures from Statistics Canada, it was assumed that domestic solvent use resulted in 100% emissions due to evaporative losses, and that solvent recovery practices were used at large commercial and industrial facilities [50].

Structural fires and slash burning emissions data was based on historical average values obtained for data available at Statistics Canada and Public Works [78, 82].

Emission factors for all miscellaneous sectors were taken from the U.S. EPA [51] or from the 1985 NAPAP study [33]. General emission factors were used since no detailed statistics were available for most of these sectors.

Section 5

Enhancements Made to the 1985 Inventory

The 1985 inventory requirements were the same as the requirements in 1980. However, missing data, uncertainties, and erroneous data had to be eliminated or reduced to the largest extent possible [83]. Three basic elements were identified that would ensure greater precision and integrity for data in the inventory:

1. the availability of detailed information on emitting sources,
2. the standardization of methodologies, and
3. the availability of an improved data handling system.

By examining the structure of the overall emissions inventory, individual building blocks of the inventory could be assessed. Through this system of analysis, a number of specific improvements were considered to be necessary. For point sources, monitoring of the following factors had to be improved and updated: the geographic location, stack parameters, the number and type of unit operations and processes, pollution control equipment, and the base quantities (production/consumption rates). Although a straightforward survey could yield such information, the task was not simple since there was no legal requirement for industry or the Canadian provinces to provide these data to Environment Canada. The appropriate use of emission factors that would be in line with those used by the EPA was also required. Given that emission factors are generally available at the process level, the proper identification of the processes was essential. Methods for spatially disaggregating area source estimates on the basis of grid squares were also weak and had to be improved. Moreover, hourly resolved emission estimates were essentially based on typical activity profiles since no other statistics were available.

To compile a more complete and accurate inventory, the project was broken down into a number of tasks, namely:

- direct provincial input,
- standardization of data codes,
- use of NAPAP emission factors,
- review of source sectors, and
- Data Base Management System improvements.

A brief description of the activities that were undertaken for each of these tasks is provided in the following sections.

5.1 Direct Provincial Input

The most reliable method for obtaining the required background data on major point sources was to acquire it directly from industry. Provincial authorities were known to have some of the required information as a result of their permit programs. Discussions were held between the Federal Government and the Provinces. Following this, a mutual interest in establishing good provincial inventories was identified. A working group on emission inventories was then

established under the Federal/Provincial Advisory Committee on Air Quality (FPACAQ). When the data requirements were outlined, the provincial ministries initiated a data collection program where required. The program was conducted between 1987 and 1988 and most of the results were submitted to Environment Canada by the fall of 1988. The data included most major sources of sulphur dioxide and nitrogen oxides and, to a lesser extent, those emitting particulate matter. The coverage for hydrocarbon emissions was generally poor.

The provincial permit data was judged to be an excellent source of information on background data that related to the type of process involved, stack parameters, rated capacities and geographic locations. Annual operating statistics were available on occasion but industry contacts were generally made for obtaining the required data. Results from stack sampling surveys were obtained and compiled, where available, either through industry performance and compliance tests or from provincial audits. These data were used in preference to standard emission factors. This information was then used to update the existing 1980 point source file at Environment Canada for the purpose of producing the 1985 inventory.

Standard methodologies for estimating SO_2 and NO_x emissions were prepared to be used as a guide in compiling the inventory by the provincial ministries. Input forms for data maintenance were previously created and submitted to the provinces. The forms were designed to streamline the transfer of data to the federal inventory system but were only used by the provinces that did not have a computerized data handling system. The use of these forms proved to be the real weak link in the overall process. Considerable effort was required to convert the provincial data into a format suitable for input into the national system.

5.2 Standardization of Data Codes

The most important modification to the 1985 inventory was the adaptation of the Source Classification Codes (SCC). In previous Canadian inventories, the SCC coding was not used within the data handling system to any large extent. As a result, the integration of Canadian data dedicated to acid rain studies within the U.S. NAPAP bilateral inventory proved difficult. The advantages of being able to link emission factors automatically at the SCC level have now been recognized and this modification is now an integral component within the Canadian inventory structure.

Source Classification Codes (SCC) for the existing processes within the current Canadian emissions inventory files were reviewed since 1980. Previously, general SCCs representing unidentified processes were extensively used for several industrial sectors. However, this procedure limited the effectiveness of the SCC objective and it had a negative impact on the accuracy of the emission estimates. With cooperation from Alliance Technologies, additional codes have been developed to accommodate unique Canadian processes. In the past, only processes in the point sources files were identified since the EPA had no SCC codes that were applicable to area sources. The advantage of having similar codes for area sources was evident. As a result, the EPA and Environment Canada have jointly developed a set of codes through Alliance Technologies.

To simplify the data exchange and integration process, Environment Canada adopted several other coding practices used by the U.S. EPA (AEROS). Control equipment codes and emission estimation method codes are two examples. Although these codes are not as crucial as the SCCs, they were useful in classifying some of the information that otherwise might have been lost or misrepresented.

5.3 *Use of National Acidic Precipitation Assessment Program (NAPAP) Emission Factors*

To increase the compatibility of the U.S. and Canadian emission estimates for similar sources, the published NAPAP emission factors on criteria pollutants were used whenever Canadian data was unavailable. These emission factors were used mainly for area sources and to some extent for point sources. They were also used for calculating all non-methane VOCs since only total hydrocarbon emissions were established by Environment Canada.

The use of NAPAP emission factors also improved the resolution of the data in some sectors since emissions were calculated for each process type. By contrast the lack of statistics in the 1980 inventory often made it necessary to use average emission factors by plant and contaminant. Presumably, this method accounted for emissions data from several processes; however, the resulting data were always highly suspect.

Emission factors in the 1985 inventory for road vehicles have now been standardized as well through the use of the Mobile 3 model. The emission rates for Canadian vehicles are different than in the U.S. since national statistics and conditions were used but no major inconsistency should now result at the border. The emission factors generated from Mobile 3 runs are expected to be more representative of the situation in Canada since the following input variables were modified:

- city/highway speeds,
- vehicle miles traveled,
- ambient temperatures,
- effects of inspection and maintenance,
- effect of anti-tampering, and
- hot/cold starts with and without catalysts.

5.4 *Review of Source Sectors*

Four separate studies were made to improve upon the emission estimates for specific sectors and the results were incorporated into the 1985 inventory:

- petroleum refineries,
- petrochemical industries,
- fuel combustion, and
- residential fuel wood.

In conjunction with the Petroleum Association for the Conservation of the Environment (PACE), the emissions of all five common air contaminants from petroleum refineries were established [40]. Although a similar study for the year 1978 was used for the 1980 assessment, the changes that occurred within the petroleum industry in the early eighties warranted further analysis.

The results of the 1980 inventory raised concerns about the high emission levels produced by the petrochemical manufacturing industry [84]. A follow-up

study revealed that the actual emission levels had been overestimated by about 60%. The study also reported the data by SCC at each plant site which helped to accurately identify the emission sources.

Emissions from stationary fuel combustion are very important and they are reported in several sectors within the inventory. With the exception of power plants, the geographical resolution of emissions from industrial, residential and commercial applications are reported as area source emissions. Therefore, the geographical resolution could be improved especially for large industrial facilities. Plant specific fuel consumption rates were requested from the provinces to provide more information on plant emissions. Unfortunately, information on fuel consumption rates was not sufficient enough to incorporate it into the point source file. Also sulphur dioxide emission estimates for fuel combustion sectors are dependent on good fuel sulphur analyses. A study was undertaken to compile fuel combustion statistics on a regional basis as reported by refineries [69]. The results were used for the 1985 inventory.

A study undertaken by the Quebec regional office was used to update emission estimates on residential fuelwood [68]. In the past, information on combustion equipment and quantities of wood burned were lacking. However, the 1985 inventory has included a survey for the province and actual statistics were produced which were then applied to provide a perspective on national residential fuel wood use.

5.5 Data Base Management System (DBMS) Improvements

The National Emissions Inventory System (NEIS), operating under the Mark IV file management system, was used for handling the 1980 inventory requirements. Several limitations were noted with the NEIS and a new system was developed for the 1985 inventory. This system was designed:

- to provide interactive access to the end user,
- to facilitate data maintenance functions,
- to integrate temporal data,
- to integrate chemical speciation data,
- to improve data retrieval capabilities, and
- to add quality control capabilities.

The dBase IV system made it possible to manage all inventory related data and was used for the electronic transfer of provincial files. It was also used for some quality control checks. Unfortunately, the data gathering activity for the 1985 inventory was initiated before the system was fully developed. Consequently, some of the planned features were not available for the 1985 inventory. Once the system objectives can be fully implemented, this DBMS should simplify the overall task of producing an emissions inventory. It should also place more confidence in the reported data.

The National Emission Inventory Database System

The database system developed for the National Emission inventory is known as the Residual Discharge Inventory System or RDIS. The system encompasses several main functions:

1. maintenance of data,
2. reporting of emissions and background data, and
3. generation of output files for modeling needs.

The RDIS system contains both point sources and area sources (including mobile sources). This universality is achieved by the underlying concept of a standard classification code and a corresponding emission estimate. Where emissions are not known, an emission factor is used. As explained earlier the emission factor refers to the release rate of a specific contaminant in an emission divided by the level of activity.

The software chosen to support the system is dBase IV. Within the dBase IV programming environment, custom reports, sorting and graphical representations can be easily produced by relatively inexperienced users of the system. The reporting system has been summarized in an unpublished Environment Canada Document titled "RDIS User Documentation".

The RDIS file structure is basically a hierarchy by nature. More precisely, it is a system that maximizes functions for file structures with "one-to-many" relationships.

The RDIS system is composed of five primary files and three support files. The five primary files are the:

1. plant file (**plant.dbf**),
2. process file (**process.dbf**),
3. stack device file (**device.dbf**),
4. contaminant file (**contam.dbf**), and
5. component file (**compon.dbf**).

A general description of the one-to-many file relationship is provided in Figure 13. The data files are updated as required by using editing screens. For quality control purposes, a history of any changes to the files is stored in a computer file. Therefore, any changes to the dBase IV files can be linked to an individual responsible for them and the reasons for the changes can be verified.

An overview of the main files and some of the fields follows. The objective is to provide an understanding of the information that may be accessed as well as the level of detail that is available. The file interrelationships are depicted in Figure 14. Specific data elements maintained in the system are provided in Appendix C. The key fields used for accessing the data are denoted by an asterisk.

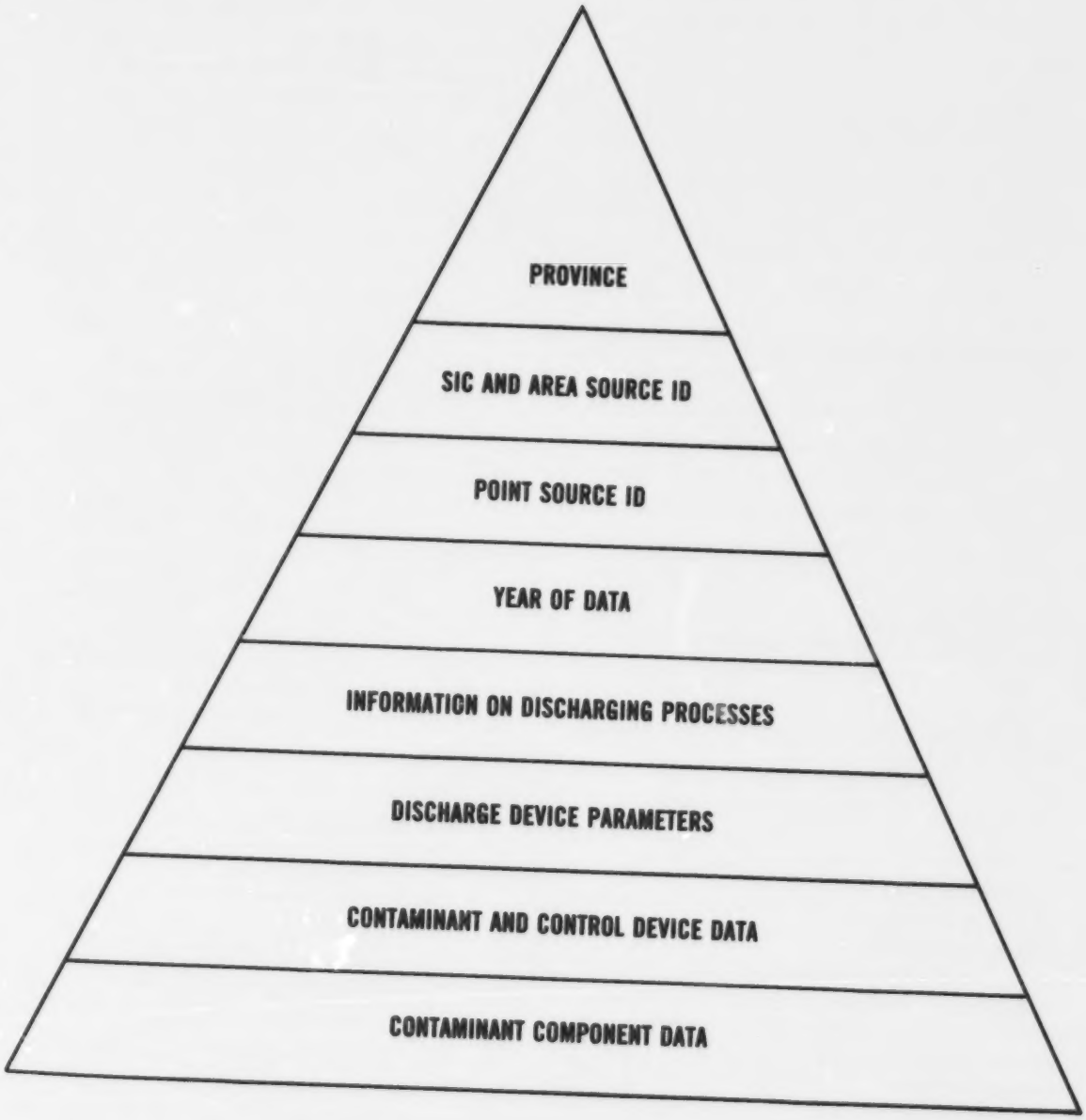

Figure 13 **Basic Design of the Residual Discharge Inventory System (RDIS)**

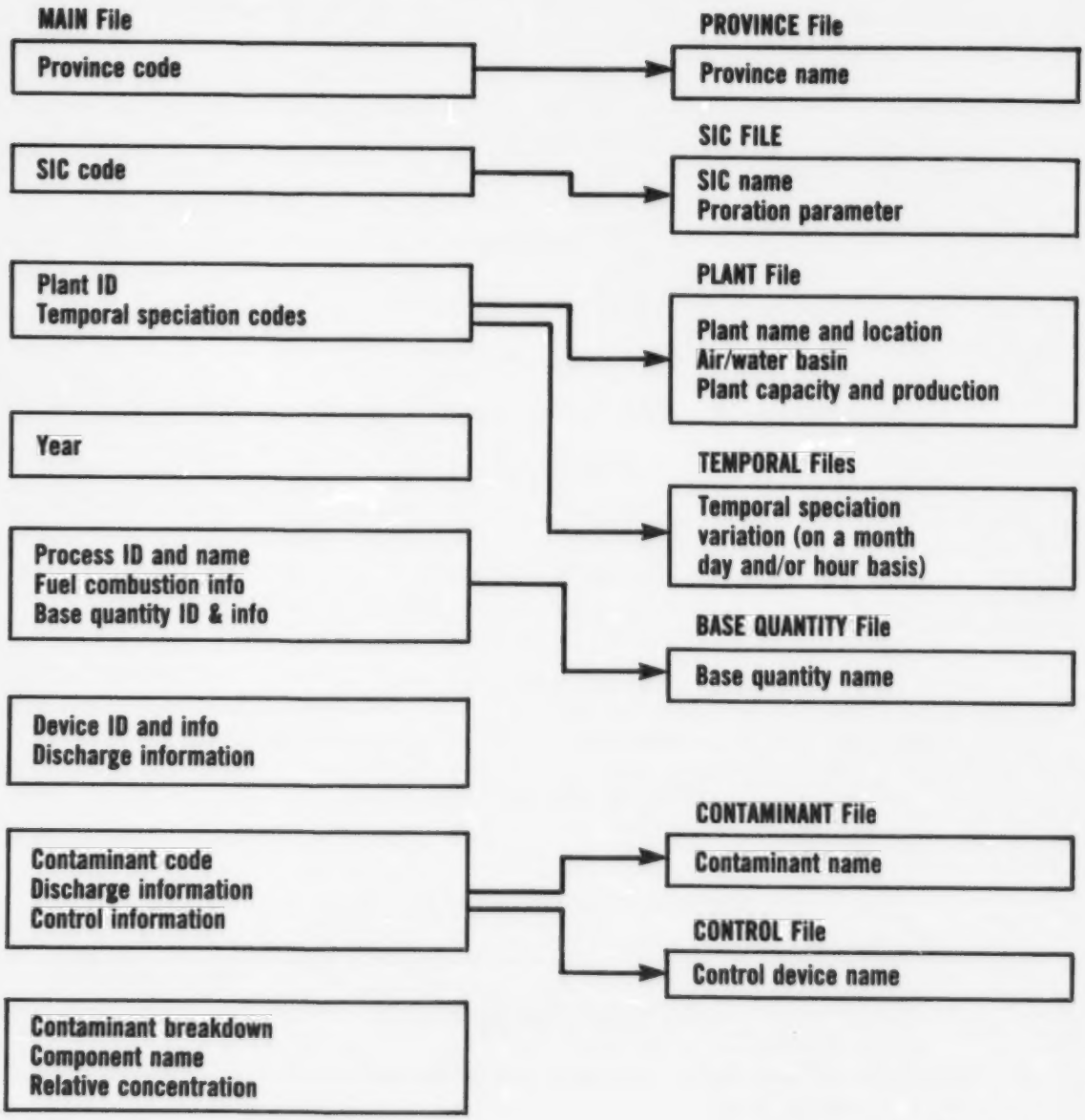

Figure 14 **Residual Discharge Inventory System File Interactions**

The **plant.dbf** file is the primary file and it coordinates the logical movement between the specific data files. It contains data on the production and capacity of each plant on an annual basis. The **plant.dbf** also contains the plant-specific codes used to orchestrate the retrieval of all information corresponding to a specific plant. The codes that link the production field to the temporal variations by month, day of week, and hour of day are contained in this file. A plant contained in **plant.dbf** may have several associated processes. Hence, one **plant.dbf** record may have many corresponding records in another file known as the **process.dbf**.

The **process.dbf** file contains detailed information on each process within the plant. Aside from the base quantity used for emission estimation, the file contains information on the control devices and characteristics of the fuel employed within the process.

The operating and physical characteristics of each point source are located in the **device.dbf** file. Information of particular interest to modeling activities, such as the stack height, stack diameter, exit velocity and exit temperature is included in this file.

The two remaining system files address the pollutant discharged by the source. The contaminant file known as **contam.dbf** contains information regarding the compound class measured (e.g., NO_x) whereas the component file or **compon.dbf** contains information regarding the specific compound (e.g., NO_2). The **contam.dbf** file contains data derived by using one of the following methods:

a) direct measurement (e.g., stack test),
b) emission estimate employing EPA AP-42 emission factors,
c) emission estimate based on emission factors derived from actual tests, or
d) emission estimate based on engineering judgement.

The method used to determine the compound class is stored in the "COMPMETH" field within the **contam.dbf** file. The efficiency of the primary (and possibly secondary) control device(s) is also provided.

The purpose of the **compon.dbf** files is to provide further speciation within a compound group. The fraction of the specific component within a compound group is listed in the "FRACTION" field. The species fraction is generally based on the U.S. EPA Air Emissions Species Manual (1988).

There are also three files that characterize the temporal activity of the source to a maximum resolution of one hour. The desired resolution for a specific dispersion model can be obtained by consecutive application of the temporal profiles beginning with YEAR. For example, a long-term model might only require a resolution based on seasonal variation. As a result, only the YEAR profile would be required. For short-term models, the YEAR profile would be applied, followed by WEEKDATA, then DAYDATA. The activity levels for each profile in these files always account for 100% of the annual emissions.

A brief description of each field in the five primary files as well as the three temporal variation files is presented in Appendix C.

Future Enhancements

The initiatives undertaken in the 1985 Emissions inventory to improve accuracy will continue to be the focus of future improvements. Several aspects of the inventory have been identified for further study. Generally, future enhancements will strive to improve methodology for specific sectors, standardize the provincial contributions to the national inventory, and streamline the database system for ease of use.

Current methodologies for estimating emissions will be reviewed and standardized through the ad hoc working group on emission inventories. Shortcomings in the available information will be assessed, as well as the emission factors that were employed. The development of emission factors that improve the accuracy of the estimation process with respect to actual emissions will be investigated for specific sectors. The sectors that have been identified as requiring additional study include:

- petroleum refineries,
- fuel marketing,
- highway vehicles,
- boilers (conventional and other fuels), and
- solvent use.

Recent changes in the petroleum industry warrant further examination. New technologies and processes along with regional differences in climate and crude oil composition will be considered in the formulation of plant specific emission factors and other evaporative losses associated with the petroleum/chemical industries. Accounting for variables with a significant effect on resultant emissions should greatly reduce the error of the emission estimates associated with these sectors. In particular, the VOC and NO_x emission factors will be reviewed.

The methodologies employed in the estimation of vehicular emissions will be addressed prior to the next inventory. Due to the great variability in climate and fuel composition, province-specific emission factors will be considered. Another aspect that warrants review is the evaporative loss that occurs during vehicle operation. Concerns regarding the underestimation of VOC emissions from the EPA model known as MOBILE 3 will also be investigated and the new Mobile 4 model will be introduced.

The 1985 National Emissions Inventory lacked sufficient information on industrial boilers and boilers fueled by alternative fuels such as wood waste. Source specific information on Canadian industrial boilers and boilers that employ nontraditional fuel will be further investigated in future studies. Other aspects that will receive attention are NO_x emission testing data, demographic resolution and operating conditions, especially those pertaining to NO_x emissions.

Due to the ever increasing detail and volume of the data contained within the Residual Discharge Information System, database improvements will be sought to streamline file structures and optimize database functions.

Information supplied by the provincial ministries is vital for the effective compilation of a national emissions inventory which is a complex and fastidious task. Efforts will also be made to minimize the work load of the provincial agencies and to assure the uniformity of standards across the provinces. Several aspects of the data handling system will have to be addressed, including manuals outlining specific methods of emission calculation.

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Appendix A

Summary of Emissions by Province

NEWFOUNDLAND

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
INDUSTRIAL						
Iron Ore	88 306	2				
Iron and Steel						
Aluminum						
Copper and Nickel						
Lead and Zinc						
Gold						
Crude Oil						
Refineries						
Gas Plants						
Coal Production						
Petrochemicals						
Plastics						
Kraft Pulping					31	31
Tar Sands						
Asbestos	3 996					
Mining and Quarrying	1 905					
Coal Industry						
Carbon Black						
Chemical Pulping		2 741				
Sawmills	130					
Other	6 981	35	1 320		39	18
Subtotal	**101 318**	**2 778**	**1 320**		**70**	**49**
FUEL COMBUSTION						
Stationary						
Refineries						
Gas Plants						
Other Industrial	1 017	13 451	2 354	224	54	42
Commercial	99	1 344	413	77	12	8
Residential	70	754	467	158	69	22
Fuelwood	12 581	302	374	50 370	8 718	8 705
Power Plants						
Utilities	1 631	22 267	3 808	284	74	66
Other	138	231	1 537	479	148	111
Subtotal	**15 536**	**38 349**	**8 953**	**51 592**	**9 075**	**8 954**

NEWFOUNDLAND

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
TRANSPORTATION						
Gasoline						
Cars	477	146	5 904	58 734	7 760	6 984
L-D Trucks	175	95	2 849	31 393	4 720	4 248
H-D Trucks	79	26	615	10 605	1 027	924
Motorcycles	6	1	22	319	105	95
Diesel						
L-D Trucks	16	60	95	58	23	22
H-D Trucks	445	477	5 252	2 093	750	717
Other	456	577	6 257	1 769	489	467
Railroads	43	61	907	318	70	67
Marine	266	705	813	3 515	1 474	1 380
Aircraft	38	67	1 316	1 578	195	174
Off-road Gas	126	19	472	18 074	3 028	2 725
Tire Wear					12	12
Subtotal	**2 127**	**2 234**	**24 502**	**128 456**	**19 653**	**17 815**
INCINERATION						
Wood Waste	60	1	5	709	60	24
Other	40	19	63	48	14	8
Subtotal	**100**	**20**	**68**	**757**	**74**	**32**
MISCELLANEOUS						
Fuel Marketing					1 853	1 853
Structural Fires					83	83
Pesticides	42					
Slash Burning	3 268		295	16 884	1 881	1 435
Solvent Use						
Dry Cleaning					1 028	1 028
Surface Coatings					1 817	1 817
General Use					2 433	2 433
Other	800			207		
Subtotal	**4 110**		**295**	**17 091**	**9 095**	**8 649**
PROVINCIAL TOTAL	**123 191**	**43 381**	**35 138**	**197 896**	**37 967**	**35 499**

PRINCE EDWARD ISLAND

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
INDUSTRIAL						
Iron Ore						
Iron and Steel						
Aluminum						
Copper and Nickel						
Lead and Zinc						
Gold						
Crude Oil						
Refineries						
Gas Plants						
Coal Production						
Petrochemicals						
Plastics						
Kraft Pulping						
Tar Sands						
Asbestos						
Mining and Quarrying						
Coal Industry						
Carbon Black						
Chemical Pulping						
Sawmills	23					
Other	172				5	5
Subtotal	**195**				**5**	**5**
FUEL COMBUSTION						
Stationary						
Refineries						
Gas Plants						
Other Industrial	10	132	36	6	1	
Commercial	64	437	112	330	64	1
Residential	30	332	210	57	28	36
Fuelwood	6 470	156	193	25 903	4 483	8
Power Plants						
Utilities	9	287	67	7	2	
Other						
Subtotal	**6 583**	**1 344**	**618**	**26 303**	**4 578**	**4 522**

PRINCE EDWARD ISLAND

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
TRANSPORTATION						
Gasoline						
Cars	154	47	1 912	19 018	2 513	2 262
L-D Trucks	46	25	743	8 187	1 231	1 108
H-D Trucks	22	7	172	2 962	287	258
Motorcycles	1		5	67	22	20
Diesel						
L-D Trucks	4	16	25	15	6	6
H-D Trucks	118	127	1 398	557	200	191
Other	69	66	695	219	84	80
Railroads	5	7	108	38	8	6
Marine	13	35	40	36	26	26
Aircraft	3	6	114	259	27	24
Off-road Gas	6	4	100	3 328	179	161
Tire Wear					4	4
Subtotal	**441**	**340**	**5 312**	**34 686**	**4 587**	**4 148**
INCINERATION						
Wood Waste	25		2	300	25	10
Other	11	5	17	13	4	2
Subtotal	**36**	**5**	**19**	**313**	**29**	**12**
MISCELLANEOUS						
Fuel Marketing					576	576
Structural Fires					62	62
Pesticides	108					
Slash Burning	542		48	2 798	312	238
Solvent Use						
Dry Cleaning					226	226
Surface Coatings					718	718
General Use					529	529
Other	263			134		
Subtotal	**913**		**48**	**2 932**	**2 423**	**2 349**
PROVINCIAL TOTAL	**8 168**	**1 689**	**5 997**	**64 234**	**11 622**	**11 036**

NOVA SCOTIA

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
INDUSTRIAL						
Iron Ore	7 608					
Iron and Steel	1 692					
Aluminum						
Copper and Nickel						
Lead and Zinc						
Gold						
Crude Oil						
Refineries	3 489	9 177	1 177	153	1 192	656
Gas Plants					5 323	3 194
Coal Production						
Petrochemicals					13 210	
Plastics					14	12
Kraft Pulping					320	320
Tar Sands			242		123	123
Asbestos						
Mining and Quarrying	14 239					
Coal Industry	8 444					
Carbon Black						
Chemical Pulping	1 017	2 389		288		
Sawmills	681					
Other	9 487	323	166	2	122	122
Subtotal	**46 657**	**11 889**	**1 585**	**443**	**20 304**	**4 427**
FUEL COMBUSTION						
Stationary						
Refineries	1 134	6 258	1 144	149	9	3
Gas Plants						
Other Industrial	1 788	9660	1 786	275	36	28
Commercial	312	4 104	1 155	204	36	24
Residential	635	5 056	1 591	2 584	626	301
Fuelwood	6 673	160	199	26 710	4 622	4 615
Power Plants						
Utilities	4 658	129 898	21 676	5 551	112	82
Other	6	25	67	20	6	5
Subtotal	**15 206**	**155 161**	**27 618**	**35 493**	**5 447**	**5 058**

NOVA SCOTIA

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
	(tonnes per year)					
TRANSPORTATION						
Gasoline						
Cars	1 036	317	12 836	127 701	16 871	15 184
L-D Trucks	345	186	5 617	61 886	9 304	8 374
H-D Trucks	134	44	1 041	17 939	1 737	1 563
Motorcycles	12	2	41	590	194	175
Diesel						
L-D Trucks	31	118	187	115	46	44
H-D Trucks	1 023	1 099	12 084	4 817	1 726	1 650
Other	741	868	9 675	2 697	822	786
Railroads	205	290	4 324	1 514	334	319
Marine	86	356	293	2 544	954	876
Aircraft	33	66	1 389	1 137	129	115
Off-road Gas	36	15	427	14 487	975	878
Tire Wear					25	25
Subtotal	**3 682**	**3 361**	**47 914**	**235 427**	**33 117**	**29 989**
INCINERATION						
Wood Waste	309	3	28	3 656	309	124
Other	70	33	108	83	25	15
Subtotal	**379**	**36**	**136**	**3 739**	**334**	**139**
MISCELLANEOUS						
Fuel Marketing					3 688	3 688
Structural Fires					225	225
Pesticides	77					
Slash Burning	4 479		404	23 140	2 578	1 967
Solvent Use						
Dry Cleaning					1 563	1 563
Surface Coatings					2 962	2 962
General Use					3 659	3 659
Other	1 666			514		
Subtotal	**6 222**		**404**	**23 654**	**14 675**	**14 064**
PROVINCIAL TOTAL	**72 146**	**170 447**	**77 657**	**298 756**	**73 877**	**53 677**

NEW BRUNSWICK

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
INDUSTRIAL						
Iron Ore		424				
Iron and Steel						
Aluminum						
Copper and Nickel						
Lead and Zinc	462	16 814				
Gold						
Crude Oil						
Refineries	172	1 546	51	7	830	457
Gas Plants					2 115	1 269
Coal Production						
Petrochemicals					1 670	
Plastics						
Kraft Pulping			2 596		474	474
Tar Sands					564	564
Asbestos						
Mining and Quarrying	9 624					
Coal Industry	1 829					
Carbon Black						
Chemical Pulping	25 814	1 557		5 549		
Sawmills	2 722					
Other	10 647					
					78	78
Subtotal	**51 270**	**20 341**	**2 647**	**5 556**	**5 731**	**2 842**
FUEL COMBUSTION						
Stationary						
Refineries	178	2 085	1 254	237	5	2
Gas Plants						
Other Industrial	1 336	15 263	2 624	284	59	46
Commercial	176	2 298	631	106	20	13
Residential	146	1 729	815	226	104	33
Fuelwood	7 597	182	227	30 411	5 2673	5 255
Power Plants						
Utilities	14 800	93 991	7 929	1 410	73	53
Other	1	12	9	2		
Subtotal	**24 234**	**115 560**	**13 489**	**32 676**	**5 524**	**5 402**

NEW BRUNSWICK

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
TRANSPORTATION						
Gasoline						
Cars	737	226	9 749	96 988	12 814	11 533
L-D Trucks	277	141	4 511	49 701	7 472	6 725
H-D Trucks	107	33	836	14 407	1 395	1 256
Motorcycles	8	1	26	372	122	110
Diesel						
L-D Trucks	25	95	150	93	37	35
H-D Trucks	704	756	8 315	3 315	1 188	1 136
Other	357	404	4 470	1 276	412	394
Railroads	12	18	266	93	21	20
Marine	14	69	51	1 538	537	486
Aircraft	11	12	191	3 371	325	289
Off-road Gas	30	16	488	16 300	867	780
Tire Wear					19	19
Subtotal	**2 282**	**1 771**	**29 053**	**187 454**	**25 209**	**22 783**
INCINERATION						
Wood Waste	717	7	65	8 470	717	287
Other	68	32	105	475	24	14
Subtotal	**785**	**39**	**170**	**8 945**	**741**	**301**
MISCELLANEOUS						
Fuel Marketing					3 213	3 213
Structural Fires					197	197
Pesticides	209					
Slash Burning	10 281		928	53 108	5 918	4 515
Solvent Use						
Dry Cleaning					1 275	1 275
Surface Coatings					2 534	2 534
General Use					3 001	3 001
Other	1 291			52		
Subtotal	**11 781**		**928**	**53 160**	**16 138**	**14 735**
PROVINCIAL TOTAL	**90 352**	**137 711**	**46 287**	**287 791**	**53 343**	**46 063**

QUEBEC

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
INDUSTRIAL						
Iron Ore	4 619					
Iron and Steel	7 232			6 593		
Aluminum	14 496	18 958		175 825		
Copper and Nickel	7 484	477 790				
Lead and Zinc	24	5 088				
Gold						
Crude Oil						
Refineries	293	6 336	360		1 237	680
Gas Plants					11 763	7 058
Coal Production						
Petrochemicals						
Plastics					26 113	22 196
Kraft Pulping					12 519	12 519
Tar Sands			3 768		1 563	1 563
Asbestos	35					
Mining and Quarrying	26 517					
Coal Industry						
Carbon Black						
Chemical Pulping	13 163	17 701		8 779		
Sawmills	19 007					
Other	61 450	43 445	2 732	7 600	6 711	6 711
Subtotal	**154 320**	**569 318**	**6 860**	**198 797**	**59 906**	**50 727**
FUEL COMBUSTION						
Stationary						
Refineries	810	8 439	4 432	26	57	20
Gas Plants						
Other Industrial	17 330	60 009	16 914	3 677	466	272
Commercial	674	8 223	3 941	716	201	133
Residential	932	11 833	6 519	1 598	763	262
Fuelwood	57 679	1 386	966	230 924	39 963	39 905
Power Plants						
Utilities						
Other	139	439	1 474	450	134	101
Subtotal	**77 564**	**90 349**	**34 246**	**237 391**	**41 584**	**40 693**

QUEBEC

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
TRANSPORTATION						
Gasoline						
Cars	7 028	1 302	87 056	866 078	114 423	102 981
L-D Trucks	729	239	11 866	130 737	19 656	17 690
H-D Trucks	374	75	2 910	50 153	4 855	4 370
Motorcycles	68	6	229	3 315	1 091	982
Diesel						
L-D Trucks	65	250	394	243	97	93
H-D Trucks	2 300	2 469	27 162	10 827	3 880	3 709
Other	2 423	2 626	29 093	8 165	2 845	2 720
Railroads	847	1 200	17 904	6 269	1 384	1 323
Marine	1 888	23 808	8 628	11 114	4 289	3 994
Aircraft	183	306	6 041	20 293	2 075	1 847
Off-road Gas	212	33	1 476	52 166	5 327	4 794
Tire Wear					122	122
Subtotal	**16 117**	**32 314**	**192 759**	**1 159 360**	**160 044**	**144 625**
INCINERATOR						
Wood Waste	5 950	54	541	70 312	5 950	2 380
Other	640	680	1 310	7 488	8 678	5 207
Subtotal	**6 590**	**734**	**1 851**	**77 800**	**14 628**	**7 587**
MISCELLANEOUS						
Fuel Marketing					23 272	23 272
Structural Fires					1 252	1 252
Pesticides	721					
Slash Burning	46 098		4 160	238 134	26 534	20 245
Solvent Use						
Dry Cleaning					11 699	11 699
Surface Coatings					31 603	31 603
General Use					27 489	27 489
Other	8 431			3 021		
Subtotal	**55 250**		**4 160**	**241 153**	**121 849**	**115 560**
PROVINCIAL TOTAL	**309 841**	**692 715**	**239 876**	**1 914 503**	**398 011**	**359 192**

ONTARIO

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
INDUSTRIAL						
Iron Ore	2 486	115 890		47 518		
Iron and Steel	6 723			201 516		
Aluminum	50					
Copper and Nickel	8 318	769 006				
Lead and Zinc	186	4 272				
Gold		9 937				
Crude Oil						
Refineries	2 251	38 429	9 043	44 980	42	23
Gas Plants					25 690	15 414
Coal Production						
Petrochemicals						
Plastics					46 588	39 600
Kraft Pulping					28 766	28 766
Tar Sands			3 287		6 200	6 200
Asbestos						
Mining and Quarrying	51 523					
Coal Industry						
Carbon Black						
Chemical Pulping	20 799	16 066		117 211		
Sawmills	217			11 761		
Other	4 987	24 378	25 824	32 807	24 169	24 169
Subtotal	**97 540**	**977 978**	**38 154**	**455 793**	**131 455**	**114 172**
FUEL COMBUSTION						
Stationary						
Refineries	1 282	21 271	8 687	360	1 763	617
Gas Plants			446			
Other Industrial	25 441	58 722	36 437	6 799	863	452
Commercial	547	4 124	9 660	1 952	688	454
Residential	991	7 980	13 887	3 059	1 324	675
Fuelwood	49 045	1 179	1 465	196 355	33 981	33 931
Power Plants						
Utilities	6 913	336 707	94 600	3 314	605	442
Other	16	3	2 973	216	9	7
Subtotal	**84 235**	**429 986**	**168 155**	**212 055**	**39 234**	**36 578**

ONTARIO

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
TRANSPORTATION						
Gasoline						
Cars	23 427	5 809	145 839	1 565 841	199 392	179 453
L-D Trucks	4 429	1 433	36 751	463 079	69 796	62 816
H-D Trucks	293	95	7 469	32 723	3 152	2 837
Motorcycles	56	9	309	5 315	1 718	1 546
Diesel						
L-D Trucks	788	595	1 477	1 653	750	717
H-D Trucks	4 429	9 294	88 827	31 847	11 442	10 938
Other	3 696	4 166	43 676	12 565	4 375	4 183
Railroads	1 521	2 241	32 144	11 255	2 483	2 374
Marine	1 270	7 327	5 678	34 899	12 269	11 145
Aircraft	310	511	10 110	37 845	3 759	3 346
Off-road Gas	593	151	4 064	144 035	21 500	19 350
Tire Wear					234	234
Subtotal	**40 812**	**31 631**	**376 344**	**2 341 057**	**330 870**	**298 939**
INCINERATOR						
Wood Waste	3 064	28	279	36 209	3 064	1 226
Other	2 343	374	1 881	2 851	1 364	818
Subtotal	**5 407**	**402**	**2 160**	**39 060**	**4 428**	**2 044**
MISCELLANEOUS						
Fuel Marketing					41 552	41 552
Structural Fires					2 119	2 119
Pesticides	2 622					
Slash Burning	36 753		317	189 863	655	500
Solvent Use						
Dry Cleaning					19 300	19 300
Surface Coatings					54 329	54 329
General Use					51 800	51 800
Other	15 339			4 893		
Subtotal	**54 714**		**317**	**194 756**	**169 755**	**169 600**
PROVINCIAL TOTAL	**282 708**	**1 439 997**	**585 130**	**3 242 721**	**675 742**	**621 333**

MANITOBA

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
INDUSTRIAL						
Iron Ore						
Iron and Steel						
Aluminum						
Copper and Nickel	4 592	378 877				
Lead and Zinc	1 624	79 903				
Gold						
Crude Oil						
Refineries					251	138
Gas Plants						
Coal Production						
Petrochemicals						
Plastics						
Kraft Pulping					1 155	1 155
Tar Sands			229		179	179
Asbestos						
Mining and Quarrying	8 033					
Coal Industry						
Carbon Black						
Chemical Pulping	1 402	282		877		
Sawmills	446					
Other	16 909	658	343	261	127	127
Subtotal	**33 006**	**459 720**	**572**	**1 238**	**1 712**	**1 599**
FUEL COMBUSTION						
Stationary						
Refineries						
Gas Plants						
Other Industrial	3 458	2 172	2 168	574	57	31
Commercial	313	307	1 290	1 849	414	240
Residential	77	306	1 375	290	121	69
Fuelwood	2 794	67	84	11 185	1 935	1 932
Power Plants						
Utilities	2 544	3 380	1 781	191	419	306
Other	82	142	924	286	88	66
Subtotal	**9 268**	**6 374**	**7 622**	**14 375**	**3 034**	**2 644**

MANITOBA

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
TRANSPORTATION						
Gasoline						
Cars	1 451	578	17 974	178 813	23 624	21 262
L-D Trucks	504	355	8 213	90 488	13 605	12 245
H-D Trucks	196	84	1 522	26 230	2 539	2 285
Motorcycles	11	2	40	581	191	172
Diesel						
L-D Trucks	45	42	273	168	67	64
H-D Trucks	1 298	334	15 325	6 109	2 189	2 093
Other	1 100	243	10 307	3 359	1 368	1 308
Railroads	862	1 172	18 215	6 378	1 408	1 346
Marine	1	11	13	4 279	1 456	1 311
Aircraft	50	91	1 833	3 009	348	310
Off-road Gas	186	114	2 432	82 084	5 111	4 600
Tire Wear					35	35
Subtotal	**5 704**	**3 026**	**76 147**	**401 498**	**51 941**	**47 031**
INCINERATION						
Wood Waste	92	1	8	1 093	92	37
Other	89	42	138	106	32	19
Subtotal	**181**	**43**	**146**	**1 199**	**124**	**56**
MISCELLANEOUS						
Fuel Marketing					4 558	4 558
Structural Fires					581	581
Pesticides	1 031					
Slash Burning	2 236		202	11 550	1 287	982
Solvent Use						
Dry Cleaning					1 903	1 903
Surface Coatings					3 802	3 802
General Use					4 447	4 447
Other	2 547			1 240		
Subtotal	**5 814**		**202**	**12 790**	**16 578**	**16 273**
PROVINCIAL TOTAL	**53 973**	**469 163**	**84 689**	**431 000**	**73 389**	**67 603**

SASKATCHEWAN

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
INDUSTRIAL						
Iron Ore						
Iron and Steel						
Aluminum						
Copper and Nickel						
Lead and Zinc						
Gold						
Crude Oil						
Refineries	362	2 022	197		3 542	1 948
Gas Plants		4 703			2 782	1 669
Coal Production						
Petrochemicals					34 820	
Plastics						
Kraft Pulping					200	200
Tar Sands			606		127	127
Asbestos						
Mining and Quarrying	2 011					
Coal Industry	5 274					
Carbon Black						
Chemical Pulping	21 668	543		2 001		
Sawmills	850					
Other	39 213	1 110	54	6 843	252	252
Subtotal	**69 378**	**8 378**	**857**	**8 844**	**41 723**	**4 196**
FUEL COMBUSTION						
Stationary						
Refineries	419		591	48 909	4	1
Gas Plants			16 919			
Other Industrial	5 902	3 828	4 218	1 108	117	63
Commercial	51	86	1 139	230	88	58
Residential	401	764	2 208	2 122	524	293
Fuelwood	3 382	81	101	13 538	2 343	2 340
Power Plants						
Utilities	29 252	68 993	35 733		334	244
Other	14	29	407	65	14	11
Subtotal	**39 421**	**73 781**	**61 316**	**65 972**	**3 424**	**3 010**

SASKATCHEWAN

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
TRANSPORTATION						
Gasoline						
Cars	1 096	437	13 575	135 055	17 843	16 059
L-D Trucks	719	507	11 716	129 090	19 409	17 468
H-D Trucks	317	136	2 464	42 466	4 111	3 700
Motorcycles	5	1	18	256	84	76
Diesel						
L-D Trucks	65	59	389	240	96	92
H-D Trucks	1 935	499	22 851	9 109	3 265	3 121
Other	2 816	605	24 890	8 335	3 538	3 382
Railroads	484	658	10 220	3 579	790	755
Marine		9	9	4 507	1 533	1 380
Aircraft	87	162	3 342	5 907	631	562
Off-road Gas	399	288	6 143	205 631	11 305	10 175
Tire Wear					37	37
Subtotal	**7 923**	**3 361**	**95 617**	**544 175**	**62 642**	**56 807**
INCINERATOR						
Wood Waste	349	3	32	4 130	349	140
Other	100	43	124	128	29	17
Subtotal	**449**	**46**	**156**	**4 258**	**378**	**157**
MISCELLANEOUS						
Fuel Marketing					4 475	4 475
Structural Fires					252	252
Pesticides	2 485					
Slash Burning	3 929		[illegible]	20 295	2 261	1 725
Solvent Use						
Dry Cleaning					1 805	1 805
Surface Coatings					3 267	3 267
General Use					4 229	4 229
Other	2 392			577		
Subtotal	**8 806**		**355**	**20 872**	**16 289**	**15 753**
PROVINCIAL TOTAL	**125 977**	**85 566**	**158 301**	**644 121**	**124 456**	**79 923**

ALBERTA

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
INDUSTRIAL						
Iron Ore						
Iron and Steel						
Aluminum						
Copper and Nickel						
Lead and Zinc						
Gold						
Crude Oil		30 00[illegible]				
Refineries	1 549	2 634	2 664	109	19 151	10 533
Gas Plants		240 280			8 837	5 302
Coal Production						
Petrochemicals					93 970	
Plastics					52 225	44 391
Kraft Pulping					2 547	2 547
Tar Sands			750		219	219
Asbestos		162 425	15 975			
Mining and Quarrying	17 345					
Coal Industry	78 681					
Carbon Black						
Chemical Pulping	3 791	2 227		3 833		
Sawmills	5 336					
Other	32 005	9 052	6 854	25 044	263	263
Subtotal	**138 707**	**446 621**	**26 243**	**28 986**	**177 212**	**63 255**
FUEL COMBUSTION						
Stationary						
Refineries	710	4 934	411	2 980	50	18
Gas Plants	979		131 480	24 121	39 885	5 065
Other Industrial	293	1 000	10 936	2 709	440	213
Commercial	216	257	4 534	904	357	236
Residential	992	762	6 920	5 257	1 324	789
Fuelwood	2 233	54	67	8 932	1 544	1 542
Power Plants						
Utilities	38 962	80 314	67 810	41 775	857	626
Other	25	90	246	73	23	17
Subtotal	**44 410**	**87 411**	**222 404**	**86 751**	**44 480**	**8 506**

ALBERTA

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
TRANSPORTATION						
Gasoline						
Cars	3 648	642	45 187	449 546	59 393	53 454
L-D Trucks	936	291	15 246	167 983	25 256	22 730
H-D Trucks	413	79	3 212	55 371	5 360	4 824
Motorcycles	30	3	101	1 460	480	432
Diesel						
L-D Trucks	84	102	506	313	125	120
H-D Trucks	2 685	911	31 700	12 636	4 528	4 329
Other	4 876	1 575	50 454	16 066	5 905	5 645
Railroads	1 694	480	35 802	12 536	2 767	2 645
Marine		7	16	8 205	2 791	2 512
Aircraft	155	249	4 753	17 615	1 923	1 711
Off-road Gas	665	209	10 083	337 787	18 820	16 938
Tire Wear					80	80
Subtotal	**15 186**	**4 548**	**197 060**	**1 079 518**	**127 423**	**115 420**
INCINERATION						
Wood Waste	1 617	15	147	19 107	1 617	647
Other	210	100	324	250	75	45
Subtotal	**1 827**	**115**	**471**	**19 357**	**1 692**	**692**
MISCELLANEOUS						
Fuel Marketing					12 927	12 927
Structural Fires					707	707
Pesticides	1 749					
Slash Burning	11 692		1 055	60 400	6 730	5 135
Solvent Use						
Dry Cleaning					4 201	4 201
Surface Coatings					6 977	6 977
General Use					9 871	9 871
Other	5 152			1 588		
Subtotal	**18 593**		**1 055**	**61 988**	**41 413**	**39 818**
PROVINCIAL TOTAL	**218 723**	**538 695**	**447 233**	**1 276 600**	**392 225**	**227 691**

BRITISH COLUMBIA

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
INDUSTRIAL						
Iron Ore						
Iron and Steel						
Aluminum	4 404	3 844		47 555		
Copper and Nickel						
Lead and Zinc	2 033	16 980				
Gold						
Crude Oil						
Refineries	717	13 815	1 887	16 413	713	392
Gas Plants		20 590			10 430	6 258
Coal Production						
Petrochemicals					117 870	
Plastics					1 875	1 594
Kraft Pulping					2 607	2 607
Tar Sands			6 710		5 540	5 540
Asbestos	139					
Mining and Quarrying	63 284					
Coal Industry	71 239					
Carbon Black						
Chemical Pulping	27 356	16 676				
Sawmills	9 951					
Other	31 450	3 643	2 096	11 324	427	427
Subtotal	**210 573**	**75 548**	**10 693**	**75 292**	**139 462**	**16 818**
FUEL COMBUSTION						
Stationary						
Refineries	586	672	277	684	29	10
Gas Plants	75		9 878	1 731	9 730	1 236
Other Industrial	51 279	12 361	25 145	465 730	48 878	41 468
Commercial	203	1 705	2 711	529	187	123
Residential	284	2 084	3 392	1 071	376	205
Fuelwood	5 547	133	166	22 204	3 843	3 837
Power Plants						
Utilities	113	102	1 657	368	148	108
Other	181	291	2 012	628	194	146
Subtotal	**58 268**	**17 348**	**45 238**	**492 945**	**63 385**	**47 133**

BRITISH COLUMBIA

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
TRANSPORTATION						
Gasoline						
Cars	4 156	1 117	51 475	512 102	67 657	60 891
L-D Trucks	1 519	722	24 742	272 610	40 986	36 887
H-D Trucks	589	171	4 585	79 023	7 650	6 885
Motorcycles	51	7	173	2 511	826	743
Diesel						
L-D Trucks	136	453	822	507	202	193
H-D Trucks	3 863	3 599	45 609	18 180	6 516	6 229
Other	3 447	3 536	44 022	13 149	4 056	3 878
Railroads	843	1 051	17 809	6 236	1 376	1 315
Marine	385	1 022	1 193	14 249	5 251	4 803
Aircraft	130	181	3 133	21 156	1 585	1 411
Off-road Gas	219	71	2 220	76 088	5 781	5 203
Tire Wear					103	103
Subtotal	**15 338**	**11 930**	**195 783**	**1 015 811**	**141 989**	**128 541**
INCINERATION						
Wood Waste	20 742	189	1 886	245 132	20 742	8 297
Other	1 600	116	377	28 873	87	52
Subtotal	**22 342**	**305**	**2 263**	**274 005**	**20 829**	**8 349**
MISCELLANEOUS						
Fuel Marketing					12 350	12 350
Structural Fires					746	746
Pesticides	499					
Slash Burning	100 094		9 033	517 073	57 615	43 960
Solvent Use						
Dry Cleaning					5 129	5 129
Surface Coatings					13 975	13 975
General Use					12 003	12 003
Other	6 461			1 701		
Subtotal	**107 054**		**9 033**	**518 774**	**101 818**	**88 163**
PROVINCIAL TOTAL	**413 575**	**105 131**	**263 010**	**2 376 827**	**467 483**	**289 004**

NORTHWEST TERRITORIES

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
INDUSTRIAL						
Iron Ore						
Iron and Steel						
Aluminum						
Copper and Nickel						
Lead and Zinc						
Gold						
Crude Oil						
Refineries					351	193
Gas Plants						
Coal Production						
Petrochemicals						
Plastics						
Kraft Pulping						
Tar Sands						
Asbestos						
Mining and Quarrying						
Coal Industry						
Carbon Black						
Chemical Pulping						
Sawmills						
Other	454					
Subtotal	**454**				**351**	**193**
FUEL COMBUSTION						
Stationary						
Refineries						
Gas Plants						
Other Industrial	5	81	72	18	2	1
Commercial	55	706	312	61	9	6
Residential	7	64	109	24	10	5
Fuelwood	1 918	46	57	7 680	1 330	1 328
Power Plants						
Utilities						
Other	288	530	3 182	999	307	230
Subtotal	**2 273**	**1 427**	**3 732**	**8 782**	**1 658**	**1 570**

NORTHWEST TERRITORIES

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
TRANSPORTATION						
Gasoline						
Cars	25	1	314	3 122	413	372
L-D Trucks	31	1	512	5 646	849	764
H-D Trucks	13		99	1 709	165	149
Motorcycles	1		2	32	11	10
Diesel						
L-D Trucks	3	2	17	11	4	4
H-D Trucks	89	17	1 050	418	150	143
Other	506	201	6 765	1 959	552	528
Railroads	7	3	140	49	11	11
Marine	4	12	13	12	9	9
Aircraft	57	73	1 148	2 441	339	302
Off-road Gas	14	1	224	7 494	399	359
Tire Wear					1	1
Subtotal	**750**	**311**	**10 284**	**22 893**	**2 903**	**2 652**
INCINERATION						
Wood Waste						
Other	6	3	10	8	2	1
Subtotal	**6**	**3**	**10**	**8**	**2**	**1**
MISCELLANEOUS						
Fuel Marketing					119	
Structural Fires					18	119
Pesticides						18
Slash Burning	242		22	1 251	139	
Solvent Use						106
Dry Cleaning					90	
Surface Coatings					122	90
General Use					209	122
Other	99			41		209
Subtotal	**341**		**22**	**1 292**	**697**	**664**
PROVINCIAL TOTAL	**3 824**	**1 741**	**14 048**	**32 975**	**5 611**	**5 080**

YUKON TERRITORY

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
INDUSTRIAL						
Iron Ore		341				
Iron and Steel						
Aluminum						
Copper and Nickel						
Lead and Zinc						
Gold						
Crude Oil						
Refineries						
Gas Plants						
Coal Production						
Petrochemicals						
Plastics						
Kraft Pulping						
Tar Sands						
Asbestos						
Mining and Quarrying	6 683					
Coal Industry						
Carbon Black						
Chemical Pulping						
Sawmills						
Other	59					
Subtotal	**6 742**	**341**				
FUEL COMBUSTION:	(included under NWT)					
Stationary						
Refineries						
Gas Plants						
Other Industrial						
Commercial						
Residential						
Fuelwood						
Power Plants						
Utilties						
Other						
Subtotal						

YUKON TERRITORY

CATEGORY / SECTOR	TPM	SO_2	NO_x	CO	THC	VOC
		(tonnes per year)				
TRANSPORTATION						
Gasoline						
Cars	21		256	2 547	336	302
L-D Trucks	30	1	485	5 339	803	723
H-D Trucks	12		94	1 620	150	135
Motorcycles			2	23	7	6
Diesel						
L-D Trucks	3	2	16	10	4	4
H-D Trucks	95	18	1 104	440	158	151
Other						
Railroads						
Marine						
Aircraft	7	9	129	1 939	77	69
Off-road Gas	3		40	1 364	89	80
Tire Wear					1	1
Subtotal	**171**	**30**	**2 126**	**13 282**	**1 625**	**1 471**
INCINERATION						
Wood Waste						
Other						
Subtotal						
MISCELLANEOUS						
Fuel Marketing					188	188
Structural Fires					20	20
Pesticides						
Slash Burning						
Solvent Use						
Dry Cleaning					40	40
Surface Coatings					61	61
General Use					94	94
Other	93			42		
Subtotal	**93**			**42**	**403**	**403**
PROVINCIAL TOTAL	**7 006**	**371**	**2 126**	**13 324**	**2 028**	**1 874**

List of Sources by Standard Industrial Code and Source Classification Codes

SIC	SIC Name	SCC	SCC Name
01630	GREENHOUSE PRODUCTS		
		10300603	EXTCOMB BOILER COMMERCL-INSTUTNL NATURAL GAS <10MMBTU/HR
02190	ANIMAL WASTE	10300903	EXTCOMB BOILER COMMERCL-INSTUTNL WOOD/BARK WASTE WOOD BOILER
		00066100	ANIMAL WASTE - CATTLE EXCREMENT
		00066200	ANIMAL WASTE - PIG EXCREMENT
02220	PESTICIDES (CROP DUSTING & SPRAYING)	00066300	ANIMAL WASTE - SHEEP EXCREMENT
02290	OTHER SERVICES INCI. AGRICULTURAL CROPS	00065000	PESTICIDE APPLICATION
		00064000	FERTILIZER APPLICATION
02390	AGRICULTURAL WIND EROSION	00064100	FERTILIZER APPLICATION - AMMONIA DISTRIBUTORS
02391	AGRICULTURAL TILLING	00043200	AGRICULTURE - WIND EROSION OF CROP
03711	INDUSTRIAL INORGANIC CHEMICAL INDUSTRIES	00043100	AGRICULTURE - FUGITIVE LAND TILLING EMISSIONS
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200692	EXT COM BOILER IND \NATURAL GAS \10 - 100 GJ/H \B.C.
		10200693	EXT COM BOILER IND \NATURAL GAS \-10 GJ/H \B.C.
		30100801	CHEM MFG INORGANIC CHEMCLS CHLORO-ALKALI LIQFN-DIAPHRM CEL
		30100899	CHEM MFG INORGANIC CHEMCLS CHLORO-ALKALI OTHER/NOT CLASI**
		30101011	CHEM MFG EXPLOSIVES TRINITROTOLUENE BATCH-FUME RECVRY
		30101015	CHEM MFG EXPLOSIVES TRINITROTOLUENE BATCH-RED WTR INR
		30101030	CHEM MFG EXPLOSIVES TRINITROTOLUENE OPEN BURN WASTE
		30102306	CHEM MFG INORGANIC CHEMCLS H2S04-CONTACT ABSRBR 99.0% CONV
		30102320	CHEM MFG INORGANIC CHEMCLS H2S04-CONTACT TNK CAR TRCK LDG
		30102399	CHEM MFG INORGANIC CHEMCLS H2S04-CONTACT NOT CLASSIFIED **
		30125001	CHEM MFG ORGANIC CHEMCLS METHANOL PRODCTN GENERAL
		30187009	INORGNC CHEM STRG FXD ROOF TNKS SULFURIC ACID BREATHING LOSS
		30187097	INORGNC CHEM STRG FXD ROOF TNKS SPECIFY LIQ BREATHING LOSS
		30188599	INORGNC CHEM STRG PRESSURE TANKS SPECIFY GAS WITHDRAWAL LOSS
		30190099	CHEM MFG MISCELLANEOUS WASTE GAS FLARES SEE COMMENT
		30199999	CHEM MFG MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
04111	WIGWAM BURNERS	40700815	ORGANIC CHEM STRG FXD ROOF TNK METHYL ALCOHOL BREATHING LOSS
04120	OTHER LOGGING INDUSTRY (SLASH BURNING)	00032100	SOLID WASTE INCINERATION - WOOD WASTE DISPOSAL
05120	OTHER FORESTRY SERVICES (FOREST FIRES)	00033100	SLASH BURNING
06110	GOLD ROASTING	00047100	FOREST FIRES
		20100101	INTERNLCOMBUSTION ELECTRIC GENERATN DIST.OIL/DIESEL TURBINE
		20100102	INTERNLCOMBUSTION ELEC GEN. DIST.OIL/DIESEL RECIPROCATING
06150	MOLYBDENUM MINES	30301301	MINING OPERATIONS METAL ORE MINING GOLD MINING GENERAL
06170	IRON ORE MINING & BENEFICIATION	30301199	MINING OPERATIONS METAL ORE MINING MOLYBEDENUM PROCESSING
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200802	EXTCOMB BOILER INDUSTRIAL COKE ALL BOILER SIZES
		30300819	PRIMARY METALS IRON & STEEL SINTERING PROCESSING
		30302303	MINING OPER METAL ORE MINING TACONITE IRON ORE ORE SCREENING
		30302401	IRON/STL NS METAL ORE MNG LOW MOISTURE ORE PRIMARY CRUSHING
		30302411	MINING OPER METAL ORE MNG DRYING-ALL MINERL BUT TI/ZR SANDS
		30501021	MINING OPER SURFACE COAL MINE GENERAL OVERBURDEN REMOVL
06210	ASBESTOS PRODUCTION	30588801	MINRL PROD FUGITIVE EMISSION NOT CLASSIFIED SEE COMMENT
		10100501	EXTCOMB BOILER ELEC GEN. DISTILLATE OIL NO 1 AND NO 2 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		20200501	INTERNLCOMBUSTION INDUSTRIAL RESIDUAL/CRUDEOIL RECIPROCATING
		30503102	METAL ORE MNG TALLIC MINRL ASBESTOS MINING SURFACE DRILLING
		30503104	MINING OPERATIONS NONMETALLIC MINRL ASBESTOS MINING LOADING
		30503105	METAL ORE MNG TALLIC MINRL ASBESTOS MINING CONVEY/HAUL ASBES
		30503110	MINING OPER NONMETALLIC MINRL ASBESTOS MINING STOCKPILING
		30503111	MINING OPER NONMETALLIC MINRL ASBESTOS MINING TAILING PILES
		30503201	MINING OPER NONMETALLIC MINRL ASBESTOS MILLING CRUSHING
		30503202	MINING OPERATIONS NONMETALLIC MINRL ASBESTOS MILLING DRYING
		30503204	MINING OPER NONMETALLIC MINRL ASBESTOS MILLING SCREENING
		30503205	MINING OPER NONMETALLIC MINRL ASBESTOS MILLING FIBERIZING
		30503206	MINING OPERATIONS NONMETALLIC MINRL ASBESTOS MILLING BAGGING
		30503299	METAL ORE MNG TALLIC MINRL ASBESTOS MILLING NOT CLASSIFIED
06240	POTASH PROCESSING	30102299	PRODUCT SIZE AND HANDLING
		30502201	METAL ORE MNG TALLIC MINRL POTASH PRODUCTION MINE-GRIND/DRY
		30502299	METAL ORE MNG TALLIC MINRL POTASH PRODUCTION NOT CLASSIFIED

SIC	SIC Name	SCC	SCC Name
06250	SALT PRODUCTION		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		30502101	MINING OPERATIONS NONMETALLIC MINRL SALT MINING GENERAL
		30502102	MINING OPER NONMETALLIC MINRL SALT MINING GRANULATN/STK DRY
06290	PHOSPHATE PROCESSING		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		30300399	PRIM METAL IRON & STEEL BY-PRODUCT COKE NOT CLASSIFIED **
		30501901	MINING OPERATIONS NONMETALLIC MINRL PHOSPHATE ROCK DRYING
		30501902	MINING OPERATIONS NONMETALLIC MINRL PHOSPHATE ROCK GRINDING
		30501903	METAL ORE MNG TALLIC MINRL PHOSPHATE ROCK TRANSFER/STORAGE
		30501905	MINING OPERATIONS NONMETALLIC MINRL PHOSPHATE ROCK CALCINING
		30501999	MINING OPER NONMETALLIC MINRL PHOSPHATE ROCK NOT CLASSIFIED
		30502002	METAL ORE MNG TALLIC MINRL STONE QUARRYING SECONDRY CRUSHING
		30502006	MINING OPER NONMETALLIC MINRL STONE QUARRYING SCREEN/CONVEY
		30502012	MINING OPERATIONS NONMETALLIC MINRL STONE QUARRYING DRYING
		30510206	MINERAL PRODUCTS BULK MATERIALS STOAGE BINS PHOSPHATE ROCK
06300	COAL INDUSTRY (CLEANING & BENEFICIATION)	10200217	EXTCOMB BOILER INDUSTRIAL BITUMINOUS COAL ATM FLUIDBD CMBST
		10200225	EXTCOMB BOILER INDSTRL SUBBITUMINUS COAL TRV GRATE OF STKR
		30501001	MINING OPERATIONS COAL CLEANING THERMAL DRYER FLUIDIZED BED
		30501006	MINING OPERATIONS COAL CLEANING THERMAL DRYER CONT CARRIER
		35001001	FLUIDIZED BED DRYER
06301	COAL INDUSTRY (MINING & HANDLING)	00053200	COAL INDUSTRY - COAL MINING
		00053210	COAL INDUSTRY - COAL HANDLING
		00053220	COAL INDUSTRY - OVERBURDEN REMOVAL FUGITIVE
		10500102	EXTCOMB BOILER SPACE HEATER INDUSTRIAL COAL **
		10500105	EXTCOMB BOILER SPACE HEATER INDUSTRIAL DISTILLATE OIL
		20100102	INTERNLCOMBUSTION ELEC GEN. DIST.OIL/DIESEL RECIPROCATING
		30501001	MINING OPERATIONS COAL CLEANING THERMAL DRYER FLUIDIZED BED
		30501008	MINING OPERATIONS COAL CLEANING MATERIAL HANDLING UNLOADING
		30501009	MINING OPER COAL CLEANING MATERIAL HANDLING RAW COAL STORAGE
		30501010	MINING OPERATIONS COAL CLEANING MATERIAL HANDLING CRUSHING
		30501011	MINING OPER COAL CLEANING MATERIAL HANDLING COAL TRANSFER
		30501012	MINING OPERATIONS COAL CLEANING MATERIAL HANDLING SCREENING
		30501014	METAL ORE MNG CLEANING MATERIAL HANDLING CLEAN COAL STORGE
		30501015	MINING OPERATIONS COAL CLEANING MATERIAL HANDLING LOADING
		30501016	METAL ORE MNG CLEANING MATERIAL HANDLING LOADING CLEANCOAL
		30501038	MINING OPERATIONS SURFACE COAL MINE TRUCK LOADING COAL
		30501099	MINING OPERATIONS COAL CLEANING NOT CLASSIFIED SEE COMMENT
		30510296	MINERAL PRODUCTS BULK MATERIALS STOAGE BINS CHEMICAL,OTHER
		30510403	MINERAL PRODUCTS BULK MATERIALS UNLOADING OPERATN COAL
06302	COAL INDUSTRY (TRANSPORTATION)	00053300	COAL INDUSTRY - COAL TRANSPORTATION
07110	NATURAL GAS PROCESSING INDUSTRY	10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200692	EXT COM BOILER IND \NATURAL GAS \10 - 100 GJ/H \B.C.
		10200693	EXT COM BOILER IND \NATURAL GAS \-10 GJ/H \B.C.
		20100102	INTERNLCOMBUSTION ELEC GEN. DIST.OIL/DIESEL RECIPROCATING
		20100291	INT COM ELEC GEN \NATURAL GAS \TURBINE \B.C.
		20100292	INT COM ELEC GEN \NATURAL GAS \RECIPROCATING \B.C.
		20200102	INTERNLCOMBUSTION INDUSTRIAL DIST.OIL/DIESEL RECIPROCATING
		20200201	INTERNLCOMBUSTION INDUSTRIAL NATURAL GAS TURBINE
		20200202	INTERNLCOMBUSTION INDUSTRIAL NATURAL GAS RECIPROCATING
		20200292	INT COMB IND \NATURAL GAS \RECIPROCATING \B.C.
		31000199	OIL & GAS PRODN CRUDE OIL PRODN NOT CLASSIFIED SEE COMMENT
		31000201	OIL & GAS PRODN NATURAL GAS PRODN GAS SWEETNG AMINE PROCESS
		31000203	OIL & GAS PRODN NATURAL GAS PRODN COMPRESSORS
		31000205	OIL & GAS PRODN NATURAL GAS PRODN FLARES
		31000299	OIL & GAS PRODN NATURAL GAS PRODN NOT CLASSIFIED SEE COMMENT
		31000402	OIL & GAS PRODN FUEL-FIRED EQPMNT PROCESS HEATERS RESIDL OIL
		31000404	OIL & GAS PRODN FUEL-FIRED EQPMNT PROCESS HEATERS NATRL GAS
		31000405	OIL & GAS PRODN FUEL-FIRED EQPMNT PROCESS HEATERS PROC GAS
		31000999	MISCELLANEOUS SO2 EMISSIONS TREATER
		40400301	OIL & GAS PRODN CRUDE OIL STORGE FXD ROOF TNK BREATHING LOSS
		40600162	PETRO IND G TANK CARS/TRUCKS GASOLINE-TRANSIT LOADED W/ FUEL
		40781604	ORGANIC CHEM STRG PRESSURE TANKS NATURAL GAS WITHDRAWAL LOSS
07113	CONVENTIONAL CRUDE OIL & NATGAS INDUSTRY	00052110	CRUDE OIL PRODUCTION - EVAPORATION
		00052120	CRUDE OIL PRODUCTION - EVAPORATION FROM SHIPS
07121	NON-CONVENTIONAL CRUDE INDUSTRY TAR SAND	10100404	EXTCOMB BOILER ELEC GENERATN RESIDUAL OIL NO 6 OIL TANG FRG
		10100801	EXTCOMB BOILER ELECTRIC GENERATN COKE ALL BOILER SIZES
		10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
		30600904	PETROLEUM INDRY PETROLEUM REFNG FLARES PROCESS GAS

SIC	SIC Name	SCC	SCC Name
08110	STONE PROCESSING (CRUSHED STONE)	00053611	STONE PROCESSING - CRUSHED STONE - PRIMARY CRUSHING
		00053612	STONE PROCESSING - CRUSHED STONE - SECONDARY CRUSHING AN
		00053613	STONE PROCESSING - CRUSHED STONE - CONVEYING AND HANDLING
		00053614	STONE PROCESSING - CRUSHED STONE - SCREENING
		00053615	STONE PROCESSING - CRUSHED STONE - SECONDARY CRUSHING
08111	STONE PROCESSING (PULVERIZED STONE)	00053621	STONE PROCESSING - PULVERIZED STONE - PRIMARY CRUSHING
		00053622	STONE PROCESSING - PULVERIZED STONE - SECONDARY CRUSHING
		00053623	STONE PROCESSING - PULVERIZED STONE - RECRUSHING SCREENI
		00053624	STONE PROCESSING - PULVERIZED STONE - FINES MILLS
		00053625	STONE PROCESSING - PULVERIZED STONE - SCREENING CONVEYIN
		00053626	STONE PROCESSING - PULVERIZED STONE - STORAGE PILE LOSSE
		00053627	STONE PROCESSING - PULVERIZED STONE - SECONDARY CRUSHING
		00053628	STONE PROCESSING - RECRUSHING
08120	LIMESTONE QUARRIES	30501602	MINERAL PRODUCTS LIME MFG SECOND CRUSH/SCRN
		30501604	MINERAL PRODUCTS LIME MFG CALCINING ROTARY KILN
		30501699	MINERAL PRODUCTS LIME MFG NOT CLASSIFIED SEE COMMENT **
		30502002	METAL ORE MNG TALLIC MINRL STONE QUARRYING SECONDRY CRUSHING
		30502006	MINING OPER NONMETALLIC MINRL STONE QUARRYING SCREEN/CONVEY
		30502012	MINING OPERATIONS NONMETALLIC MINRL STONE QUARRYING DRYING
08210	SAND AND GRAVEL PROCESSING (PITS)	00053500	SAND AND GRAVEL PROCESSING
		20100102	INTERNLCOMBUSTION ELEC GEN. DIST.OIL/DIESEL RECIPROCATING
		30501115	MINERAL PRODUCTS CONCRETE BATCHING STORAGE BINS/HOPPERS
		30501613	MINERAL PRODUCTS LIME MFG LIME SILOS
		30502001	IRON/STL NS NONMETALLIC MINRL STONE QUARRYNG PRIMARY CRUSHNG
		30502002	METAL ORE MNG TALLIC MINRL STONE QUARRYING SECONDRY CRUSHING
		30502006	MINING OPER NONMETALLIC MINRL STONE QUARRYING SCREEN/CONVEY
		30502012	MINING OPERATIONS NONMETALLIC MINRL STONE QUARRYING DRYING
		30502099	METAL ORE MNG TALLIC MINRL STONE QUARRYING NOT CLASSIFIED **
		30502501	MINING OPER NONMETALLIC MINRL SAND/GRAVEL TOTAL PLNT-GENL**
		30502508	MINING OPERATIONS NONMETALLIC MINRL SAND/GRAVEL DRYER
		30502510	MINING OPERATIONS NONMETALLIC MINRL SAND/GRAVEL CRUSHING
		30502599	MINING OPER NONMETALLIC MINRL SAND/GRAVEL NOT CLASSIFIED **
08211	SILICA PROCESSING	30502001	IRON/STL NS NONMETALLIC MINRL STONE QUARRYNG PRIMARY CRUSHNG
		30502002	METAL ORE MNG TALLIC MINRL STONE QUARRYING SECONDRY CRUSHING
		30502004	METAL ORE MNG TALLIC MINRL STONE QUARRYING RECRUSH/SCREENING
		30502005	MINING OPER NONMETALLIC MINRL STONE QUARRYING FINES MILL
		30502006	MINING OPER NONMETALLIC MINRL STONE QUARRYING SCREEN/CONVEY
		30502007	MINING OPER NONMETALLIC MINRL STONE QUARRYING OPEN STORAGE
		30502012	MINING OPERATIONS NONMETALLIC MINRL STONE QUARRYING DRYING
09290	OTHER SERVICE INDUSTRY INCIDENTAL MINING	00053410	MINING AND ROCK QUARRYING - OPEN PIT MINING
		00053430	MINING AND ROCK QUARRYING - UNDER GROUND MINING
		00053440	MINING AND ROCK QUARRYING - CONCENTRATE DRYERS
		00053450	MINING AND ROCK QUARRYING - CONCENTRATE TRANSPORT
		10200201	EXTCOMB BOILER INDUSTRIAL BITUMINOUS COAL PULV COAL WET BOT
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		30301301	MINING OPERATIONS METAL ORE MINING GOLD MINING GENERAL
		30501502	MINERAL PRODUCTS GYPSUM MFG ROLLER MILLS
		30501512	MINERAL PRODUCTS GYPSUM MFG CALCINER FLASH
		30501518	MINERAL PRODUCTS GYPSUM MFG BOARD MAKING MIXERS/CONVEYOR
		30501599	MINERAL PRODUCTS GYPSUM MFG NOT CLASSIFIED SEE COMMENT **
		30501801	MINERAL PRODUCTS PERLITE MFG VERTICAL FURNACE GENERAL
		30502101	MINING OPERATIONS NONMETALLIC MINRL SALT MINING GENERAL
09291	FUGITIVE EMISSIONS (MINE TAILINGS PILES)	00046100	TAILING PILES EROSION
10100	SLAUGHTER & MEAT PROCESSING	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30201301	FOOD/AGRICLTR MEAT SMOKING COMBINED OPERATNS GENERAL
		30299999	FOOD/AGRICLTR MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
10110	MEAT & MEAT PRODUCTS	10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10300501	EXTCOMB BOILER COM-INSTUTNL DISTILLATE OIL NO 1 AND NO 2 OIL
		30200802	FOOD/AGRICLTR FEED MANUFACT OTHER GRAIN FEED GRAIN RECEIVING
		30200805	FOOD/AGRICLTR FEED MANUFACTURE OTHER GRAIN FEED GRINDING
		30290001	FOOD/AGRICLTR FUEL-FIRED EQPMNT PROC HEATERS DIST OIL(NO.2)
10210	FISH PRODUCTS INDUSTRY	10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200693	EXT COM BOILER IND \NATURAL GAS \-10 GJ/H \B.C.

SIC	SIC Name	SCC	SCC Name
10210	FISH PRODUCTS INDUSTRY		
		20100102	INTERNLCOMBUSTION ELEC GEN. DIST.OIL/DIESEL RECIPROCATING
		20200292	INT COMB IND \NATURAL GAS \RECIPROCATING \B.C.
		30201201	FOOD/AGRICLTR FISH PROCESSING FISH MEAL COOKERS-FRESHFISH
		30201205	FOOD/AGRICLTR FISH PROCESSING FISH MEAL STEAM TUBE DRYER
		30201299	FOOD/AGRICLTR FISH PROCESSING FISH MEAL OTHER/NOT CLASI**
10320	FROZEN FRUIT AND VEGETABLE INDUSTRY	10300692	EXT COM BOILER COMM-INST \NATURAL GAS \10-100 GJ/H \B.C.
		10300693	EXT COM BOILER COMM-INST \NATURAL GAS \-10 GJ/H \B.C.
		30299999	FOOD/AGRICLTR MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
10500	DAIRY FACTORIES		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200692	EXT COM BOILER IND \NATURAL GAS \10 - 100 GJ/H \B.C.
		10200693	EXT COM BOILER IND \NATURAL GAS \-10 GJ/H \B.C.
		10201301	EXTCOMB BOILER INDSTRL LIQ WASTE-SPECIFY SPEC MAT COMM FLD
		30200732	FOOD/AGRICLTR GRAIN MILLING WHEAT MILLING PRECLEAN/HANDLING
		30200733	FOOD/AGRICLTR GRAIN MILLING WHEAT MILLING CLEANING HOUSE
		30200734	FOOD/AGRICLTR GRAIN MILLING WHEAT MILLING MILLHOUSE
		30200804	FOOD/AGRICLTR FEED MANUFACTURE OTHER GRAIN FEED HANDLING
		30200805	FOOD/AGRICLTR FEED MANUFACTURE OTHER GRAIN FEED GRINDING
		30200806	FOOD/AGRICLTR FEED MANUFACT OTHER GRAIN FEED PELLET COOLERS
		30299999	FOOD/AGRICLTR MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
10530	FEED INDUSTRY		
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200692	EXT COM BOILER IND \NATURAL GAS \10 - 100 GJ/H \B.C.
		10200693	EXT COM BOILER IND \NATURAL GAS \-10 GJ/H \B.C.
		10300693	EXT COM BOILER COMM-INST \NATURAL GAS \-10 GJ/H \B.C.
		30200102	FOOD/AGRICLTR ALFALFA DEHYDRATI CYCLONE AND DRYER PRIMARY
		30200103	FOOD/AGRICLTR ALFALFA DEHYDRATI MEAL COLLECTOR CYCLONE
		30200104	FOOD/AGRICLTR ALFALFA DEHYDRATI PELLET COOLER CYCLONE
		30200199	FOOD/AGRICLTR ALFALFA DEHYDRATI NOT CLASSIFIED SEE COMMNT **
		30200802	FOOD/AGRICLTR FEED MANUFACT OTHER GRAIN FEED GRAIN RECEIVING
		30200804	FOOD/AGRICLTR FEED MANUFACTURE OTHER GRAIN FEED HANDLING
		30200805	FOOD/AGRICLTR FEED MANUFACTURE OTHER GRAIN FEED GRINDING
		30200806	FOOD/AGRICLTR FEED MANUFACT OTHER GRAIN FEED PELLET COOLERS
		30200899	FOOD/AGRICLTR FEED MANUF OTHER GRAIN FEED NOT CLASSIFIED **
10720	BAKERIES		
		00051000	BAKERIES
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
11110	SOFT DRINK INDUSTRY		
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200692	EXT COM BOILER IND \NATURAL GAS \10 - 100 GJ/H \B.C.
11200	FRUITS & VEGETABLES CANNERS PRESERVERS	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
11210	DISTILLERY PRODUCTS INDUSTRY		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200692	EXT COM BOILER IND \NATURAL GAS \10 - 100 GJ/H \B.C.
		30200901	FOOD/AGRICLTR FERMENTATION BEER PRODUCTION GRAIN HANDLING
		30201001	FOOD/AGRICLTR FERMENTATION WHISKEY PRODUCTN GRAIN HANDLING
		30201002	FOOD/AGRICLTR FERMENT WHISKEY PRODUCTN DRYING SPNT GRAIN
		30201099	FOOD/AGRICLTR FERMENTATN WHISKEY PRODUCTN OTHER/NOT CLASI**
		30201199	FOOD/AGRICLTR FERMENTATION WINE PRODUCTION NOT CLASSIFIED
		30299999	FOOD/AGRICLTR MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
11310	BREWERY PRODUCTS INDUSTRY		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200504	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 4 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200691	EXT COM BOILER IND \NATURAL GAS \100+ GJ/H \B.C.
		30200752	FOOD/AGRICLTR GRAIN MILLING CORN WET MILLING GRAIN HANDLING
		30200753	FOOD/AGRICLTR GRAIN MILLING CORN WET MILLING GRAIN CLEANING
		30200901	FOOD/AGRICLTR FERMENTATION BEER PRODUCTION GRAIN HANDLING
		30200902	FOOD/AGRICLTR FERMENTATION BEER PRODUCTION DRYING SPNT GRAIN
		30200903	FOOD/AGRICLTR FERMENTATION BEER PRODUCTION BREWING
		30200904	FOOD/AGRICLTR FERMENTATION BEER PRODUCTION AGING
		30200999	FOOD/AGRICLTR FERMENTATION BEER PRODUCTION OTHER/NOT CLASI**
12110	LEAF TOBACCO PROCESSING		
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL

SIC	SIC Name	SCC	SCC Name
12110	LEAF TOBACCO PROCESSING		
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30203399	FOOD/AGRICLTR TOBACCO PRODUCTS NOT CLASSIFIED SEE COMMENT
12220	OTHER TOBACCO PROD. (CIGARETTE SMOKING)	00081000	CIGARETTE SMOKING - GENERAL
12300	FEED MANUFACTURES		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200504	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 4 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200707	EXTCOMB BOILER INDUSTRIAL PROCESS GAS COKE OVEN
		30300312	PRIM METAL IRON & STEEL BY-PRODUCT COKE CK CRSH/SCRN/HAND
		30500401	MINERAL PRODUCTS CALCIUM CARBIDE ELECTRIC FURNACE
		30500405	MINERAL PRODUCTS CALCIUM CARBIDE CRUSHING PRIMARY & SECONDY
		30500499	MINERAL PRODUCTS CALCIUM OTHER NOT CLAS
		30501615	MINERAL PRODUCTS LIME MFG PRODUCT TRAN/CONV
12400	FLOUR MILLS		
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30201401	FOOD/AGRICLTR STARCH MFG COMBINED OPERATNS GENERAL
13100	CONFECTIONERY MANUFACTURING	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200404	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 5 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30201799	FOOD/AGRICLTR PEANUT PROCESSING NOT CLASSIFIED SEE COMMENT
		30201899	FOOD/AGRICLTR CANDY MANUFACTURE NOT CLASSIFIED SEE COMMENT
		30299999	FOOD/AGRICLTR MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
13300	SUGAR REFINERIES		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30201601	FOOD/AGRICLTR SUGAR BEET PROCES DRYER GENERAL
		30201699	FOOD/AGRICLTR SUGAR BEET PROCES NOT CLASSIFIED SEE COMMENT
13500	VEGETABLE OIL MILLS		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30200782	FOOD/AGRICLTR GRAIN MILLING SOYBEAN MILLING GRAIN HANDLING
		30200785	FOOD/AGRICLTR GRAIN MILLING SOYBEAN MILLING CRACKING/DEHULLNG
		30200789	FOOD/AGRICLTR GRAIN MILLING SOYBEAN MILLING MEAL DRYING
13900	MISCELANEOUS FOOD INDUSTRIES	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30200201	FOOD/AGRICLTR COFFEE ROASTING ROASTER DIRECT FIRED
		30200203	FOOD/AGRICLTR COFFEE ROASTING STONER/COOLER STONER/COOLER
		30200299	FOOD/AGRICLTR COFFEE ROASTING NOT CLASSIFIED SEE COMMENTS
		30299999	FOOD/AGRICLTR MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
14700	WINERIES		
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
15111	TIRE & TUBE INDUSTRY (TIRE WEAR)	00026100	TIRE WEAR - 4 WHEELED
		00026200	TIRE WEAR - 8 WHEELED
15990	OTHER RUBBER PRODUCTS INDUSTRIES	10200603	EXTCOMB BOILER INDUSTRIAL NATURAL GAS <10MMBTU/HR
		30900202	FAB METAL ABRASIVE BLASTING OF METAL PARTS SAND ABRASIVE
		40202501	ORGNC SOLVNT SURFACE COATNG MISC.METAL PARTS COATNG OPERATN
16110	FOAMED AND EXPANDED PLASTIC PRODUCTS IND	30800701	RUBBER/PLASTICS FAB PLSTC PROD PLSTC MACHINNG DRILNG,SANDNG
		30800702	RUBBER/PLASTICS FAB. PLASTIC PROD MOLD RELEASE
		30800799	RUBBER/PLASTICS FAB.PLASTIC PROD NOT CLASSIFIED SEE COMMENT
16210	PLASTIC PIPE AND PIPE FITTINGS INDUSTRY	30800701	RUBBER/PLASTICS FAB PLSTC PROD PLSTC MACHINNG DRILNG,SANDNG
		30800799	RUBBER/PLASTICS FAB.PLASTIC PROD NOT CLASSIFIED SEE COMMENT
16300	TIRE & TUBE MANUFACTURES		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30800101	RUBBER/PLASTICS TIRE MFG UNDERTREAD & SIDE WALL CEMENTING
		30800104	RUBBER/PLASTICS TIRE MFG TIRE BUILDING
		30800107	RUBBER/PLASTICS TIRE MFG TIRE CURING
		30800199	RUBBER/PLASTICS TIRE MFG NOT CLASSIFIED SEE COMMENT
17200	LEATHER TANNERIES		
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		32099998	LEATHER PRODUCTS MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
19000	MUSHROOM PRODUCTION		
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR

SIC	SIC Name	SCC	SCC Name
19300	WOOL YARN MILLS		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		40200801	ORGANIC SOLVENT SURFACE COATING COATING OVEN GENERAL
		40201001	ORGANIC SOLVENT SURFACE COATING OVEN HEATER NATURAL GAS
20100	SYNTHETIC TEXTILE MILLS		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10201201	EXTCOMB BOILER INDSTRL SLD WASTE-SPECIFY SPEC MAT COMM FLD
		30100101	CHEM MFG ORGANIC CHEMCLS ADIPIC ACID PROD ALL ADIPC ACD FAC
		30101852	CHEM MFG PLASTICS PRODN POLYFLUOROCARBONS GENERAL
		30101899	CHEM MFG PLASTICS PRODN NOT CLASSIFIED SEE COMMENTS
		30102401	CHEM MFG PLASTICS PRODN SYNTHC ORGNC FIBR POLYAMIDE NYLON
		30102402	CHEM MFG PLASTICS PRODN SYNTHC ORGNC FIBR POLYESTERS DACRON
		30103420	CHEM MFG ORGANIC CHEMCLS AMINES/AMIDES HEXAMETHYLENEDIAM
		33000101	TEXTILE PROD GENERAL FABRICS NOT CLASSIFIED YARN PREP/BLEACH
21100	FIBRE PREPARING MILLS		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30102501	CHEM MFG PLASTICS PRODN CELLULOSIC FIBER VISCOSE RAYON
21600	CARPET MAT & RUG INDUSTRY		
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		33000399	TEXTILE PRODUCTS CARPET OPERATNS NOT CLASSIFIED SEE COMMENT
		40100499	ORGANIC SOLVENT TEXTILE MFG FABRIC SCOURING SPECIFY SOLVENT
		40201111	ORGANIC SOLVENT SURFACE COATING FABRIC PRINTING ROLLER
21800	TEXTILE DYEING & REFINING		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
25110	SHINGLE AND SHAKE INDUSTRY	10200902	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE WOOD/BARK>50K STM
		30700803	WOOD PRODUCTS SAWMILL OPERATION SAWDUST HANDLING GENERAL
		30700804	WOOD PRODUCTS SAWMILL OPERATION SAWING CYCLONE EXHAUST
		30700808	WOOD PROD SAWMILL OPERATION OTHER CYCLONES CYCLONE EXHAUST
		30700886	IND PROCESS WOOD PROD\SAWMILL OPERATION\WOOD WASTE BURNER
		30700898	WOOD PRODUCTS SAWMILL OPERATION NOT CLASSIFIED SEE COMMENT
		30790003	WOOD PRODUCTS FUEL FIRED EQPMNT PROCESS HEATERS NAT GAS
25120	WOOD INDUSTRY (SAWMILLS)		
		00057100	WOOD INDUSTRY - SAWMILL PRODUCTION
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200692	EXT COM BOILER IND \NATURAL GAS \10 - 100 GJ/H \B.C.
		10200693	EXT COM BOILER IND \NATURAL GAS \-10 GJ/H \B.C.
		10200901	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE BARK>50K LB STEAM
		10200904	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE BARK<50K LB STEAM
		10200905	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE WOOD/BARK<50K STM
		10200906	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE WOOD<50K LB STEAM
		10200992	EXT COM BOILER IND\WOOD/BARK\BOILER >23000 KG/H STEAM
		10200996	EXT COMB HOT GAS IND \WOOD WASTE\ <50 GJ/H
		10200999	EXT COM BOILER IND\WOOD/BARK\BOILER\NOT CLASSIFIED
		10201002	EXTCOMB BOILER INDUSTRIAL LIQ PETROLEUM GAS PROPANE
		30700701	WOOD PRODUCTS PLYWOOD/PARTBOARD VENEER DRYERS GENERAL
		30700712	WOOD PROD PLYWOOD/PARTBOARD VENEER DRYERS FIR-SAPWOOD-GAS
		30700799	WOOD PRODUCTS PLYWOOD/PARTBOARD NOT CLASSIFIED SEE COMMENT
		30700801	WOOD PRODUCTS SAWMILL OPERATION LOG DEBARKING GENERAL
		30700802	WOOD PRODUCTS SAWMILL OPERATION LOG SAWING GENERAL
		30700803	WOOD PRODUCTS SAWMILL OPERATION SAWDUST HANDLING GENERAL
		30700804	WOOD PRODUCTS SAWMILL OPERATION SAWING CYCLONE EXHAUST
		30700805	WOOD PROD SAWMILL OPERATN PLANING & TRIMMNG CYCLONE EXHAUST
		30700808	WOOD PROD SAWMILL OPERATION OTHER CYCLONES CYCLONE EXHAUST
		30700881	IND PROCESS WOOD PROD\SAWMILL OPERATION\WOOD WASTE BOILER
		30700886	IND PROCESS WOOD PROD\SAWMILL OPERATION\WOOD WASTE BURNER
		30700891	IND PROCESS WOOD PROD\SAWMILL OPER.\OVERALL PARTICULATE
		30700897	WOOD PRODUCTS SAWMILL OPERATION NOT CLASSIFIED SEE COMMENT
		30700899	WOOD PRODUCTS SAWMILL OPERATION NOT CLASSIFIED SEE COMMENT
		30790003	WOOD PRODUCTS FUEL FIRED EQPMNT PROCESS HEATERS NAT GAS
25200	WOOD INDUSTRY (PLYWOOD & VENEER)	00057200	WOOD INDUSTRY - PLYWOOD AND VENEER PRODUCTION
		10200504	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 4 OIL
		10200692	EXT COM BOILER IND \NATURAL GAS \10 - 100 GJ/H \B.C.
		10200693	EXT COM BOILER IND \NATURAL GAS \-10 GJ/H \B.C.
		10200901	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE BARK>50K LB STEAM
		10200903	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE WOOD>50K LB STEAM
		10200904	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE BARK<50K LB STEAM
		10200996	EXT COMB HOT GAS IND \WOOD WASTE\ <50 GJ/H
		30700701	WOOD PRODUCTS PLYWOOD/PARTBOARD VENEER DRYERS GENERAL
		30700703	WOOD PRODUCTS PLYWOOD/PARTBOARD PRT BRD DRY OPER GENERAL
		30700712	WOOD PROD PLYWOOD/PARTBOARD VENEER DRYERS FIR-SAPWOOD-GAS

SIC	SIC Name	SCC	SCC Name
25200	WOOD INDUSTRY (PLYWOOD & VENEER)	30700799	WOOD PRODUCTS PLYWOOD/PARTBOARD NOT CLASSIFIED SEE COMMENT
		30700804	WOOD PRODUCTS SAWMILL OPERATION SAWING CYCLONE EXHAUST
		30700808	WOOD PROD SAWMILL OPERATION OTHER CYCLONES CYCLONE EXHAUST
		30700899	WOOD PRODUCTS SAWMILL OPERATION NOT CLASSIFIED SEE COMMENT
		30790003	WOOD PRODUCTS FUEL FIRED EQPMNT PROCESS HEATERS NAT GAS
		40200101	ORGNC SOLVNT SURFACE COATING PAINT-GENERAL SOLVENT-BASE CTNG
25201	WOOD INDUSTRY (PULPBOARD PLANTS)	00057300	WOOD INDUSTRY - PULPBOARD PRODUCTION
25420	WOODEN KITCHEN CABINET & BATHROOM VANITY	30702099	WOOD PRODUCTS FURNITURE MFG NOT CLASSIFIED SEE COMMENT
		30703096	WOOD PRODUCTS MISCELLANEOUS SANDING/PLANING SEE COMMENT
		40200501	ORGANIC SOLVENT SURFACE COATING ENAMEL GENERAL
		40201901	ORGNC SOLVNT SURFACE COATNG WOOD FURNITURE COATING OPERATION
25430	WOODEN DOOR AND WINDOW INDUSTRY	10200906	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE WOOD<50K LB STEAM
		30700899	WOOD PRODUCTS SAWMILL OPERATION NOT CLASSIFIED SEE COMMENT
		30702099	WOOD PRODUCTS FURNITURE MFG NOT CLASSIFIED SEE COMMENT
25490	OTHER MILLWORK INDUSTRIES	10200692	EXT COM BOILER IND \NATURAL GAS \10 - 100 GJ/H \B.C.
		30700805	WOOD PROD SAWMILL OPERATN PLANING & TRIMMNG CYCLONE EXHAUST
		30703096	WOOD PRODUCTS MISCELLANEOUS SANDING/PLANING SEE COMMENT
25610	WOODEN BOX AND PALLET INDUSTRY	30700808	WOOD PROD SAWMILL OPERATION OTHER CYCLONES CYCLONE EXHAUST
		30703096	WOOD PRODUCTS MISCELLANEOUS SANDING/PLANING SEE COMMENT
25810	COFFIN AND CASKET INDUSTRY	40201901	ORGNC SOLVNT SURFACE COATNG WOOD FURNITURE COATING OPERATION
25900	MISCELANEOUS WOOD INDUSTRIES	10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200901	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE BARK>50K LB STEAM
		30700899	WOOD PRODUCTS SAWMILL OPERATION NOT CLASSIFIED SEE COMMENT
25910	WOOD PRESERVATION INDUSTRY	10200693	EXT COM BOILER IND \NATURAL GAS \-10 GJ/H \B.C.
		30700804	WOOD PRODUCTS SAWMILL OPERATION SAWING CYCLONE EXHAUST
25920	PARTICLE BOARD INDUSTRY	30700702	WOOD PRODUCTS PLYWOOD/PARTBOARD SAND OPERATIONS GENERAL
		30700703	WOOD PRODUCTS PLYWOOD/PARTBOARD PRT BRD DRY OPER GENERAL
		30700704	WOOD PRODUCTS PLYWOOD/PARTBOARD WAFERBOARD DRYER
		30700799	WOOD PRODUCTS PLYWOOD/PARTBOARD NOT CLASSIFIED SEE COMMENT
		30700804	WOOD PRODUCTS SAWMILL OPERATION SAWING CYCLONE EXHAUST
		30700805	WOOD PROD SAWMILL OPERATN PLANING & TRIMMNG CYCLONE EXHAUST
25990	OTHER WOOD INDUSTRIES N.E.C.	30703001	WOOD PRODUCTS MISCELLANEOUS WOODWASTE STORAGE BIN VENT
27100	PULP AND PAPER INDUSTRY (NON CLASSIFIED)	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200692	EXT COM BOILER IND \NATURAL GAS \10 - 100 GJ/H \B.C.
		30700401	PULP & PAPER PULPBOARD PAPERBOARD GENERAL
		30700808	WOOD PROD SAWMILL OPERATION OTHER CYCLONES CYCLONE EXHAUST
		30790004	IND PROCESS WOOD PROD\GWD PULP\NAT GAS DRYER 10-100 GJ/H
		30799999	WOOD PRODUCTS MISCELLANEOUS NOT CLASSIFIED SEE COMMENT **
27108	THERMO-MECHANICAL PULPING (KRAFT)	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200901	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE BARK>50K LB STEAM
		30700304	PULP & PAPER SEMICHEMICAL PULP SULFUR BURN/ABSRB GENERAL
27109	NEUTRAL SULPHITE PULPING	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
		10200901	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE BARK>50K LB STEAM
		10200902	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE WOOD/BARK>50K STM
27110	KRAFT (SULPHATE) PULPING	10200201	EXTCOMB BOILER INDUSTRIAL BITUMINOUS COAL PULV COAL WET BOT
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
		10200691	EXT COM BOILER IND \NATURAL GAS \100+ GJ/H \B.C.
		10200692	EXT COM BOILER IND \NATURAL GAS \10 - 100 GJ/H \B.C.
		10200901	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE BARK>50K LB STEAM
		10200902	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE WOOD/BARK>50K STM
		10200903	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE WOOD>50K LB STEAM
		10200992	EXT COM BOILER IND\WOOD/BARK\BOILER >23000 KG/H STEAM
		10200998	EXT COM BOILER IND\WOOD/BARK & LOW OIL\ >23000 KG/H STEAM
		10201301	EXTCOMB BOILER INDSTRL LIQ WASTE-SPECIFY SPEC MAT COMM FLD

SIC	SIC Name	SCC	SCC Name
27110	KRAFT (SULPHATE) PULPING		
		30700104	PULP & PAPER KRFT PULPNG RECVRY FURNACE W/ DIRECT CNTACTEVAP
		30700105	PULP & PAPER KRAFT PULPING SMELT DISSOLV TNK GENERAL
		30700106	PULP & PAPER KRAFT PULPING LIME KILN GENERAL
		30700110	PULP & PAPER KRFT PULPNG RECVRY FURNACE W/ INDIRECT CONTEVAP
		30700194	IND PROCESS WOOD PROD\SULFATE PULP\RECOVERY BOILER/EVAP
		30700196	IND PROCESS WOOD PROD\SULFATE PULP\LIME KILN
		30700199	PULP & PAPER KRAFT PULPING NOT CLASSIFIED SEE COMMENT
		30700302	PULP & PAPER SEMICHEMICAL PULP EVAPORATOR GENERAL
27111	SULPHITE PULPING		
		10100903	EXTCOMB BOILER ELECTRIC GENERATN WOOD/BARK WASTE WOOD BOILER
		10200201	EXTCOMB BOILER INDUSTRIAL BITUMINOUS COAL PULV COAL WET BOT
		10200301	EXTCOMB BOILER INDUSTRIAL LIGNITE PULVERIZED COAL
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
		10200901	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE BARK>50K LB STEAM
		10200902	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE WOOD/BARK>50K STM
		10200992	EXT COM BOILER IND\WOOD/BARK\BOILER >23000 KG/H STEAM
		10201301	EXTCOMB BOILER INDSTRL LIQ WASTE-SPECIFY SPEC MAT COMM FLD
		10300401	EXTCOMB BOILER COMMERCL-INSTUTNL RESIDUAL OIL NO 6 OIL
		30700104	PULP & PAPER KRFT PULPNG RECVRY FURNACE W/ DIRECT CNTACTEVAP
		30700201	IND PROCESS WOOD PROD\SULFITE PULP\LIQ. RECOVERY **
		30700203	PULP & PAPER SULFITE PULPING DIGESTER/BLOW PIT ALL EXCEPT CA
		30700208	IND PROCESS WOOD PROD\SULFITE PULPING\DIGESTER DISCHARGE
		30700209	IND PROCESS WOOD PROD\SULFITE PULPING\ABSORPTION TOWER
		30700210	PULP & PAPER SULFITE PULPING MISCELLANEOUS
		30700211	PULP & PAPER SULFITE PULPING DIGESTER/BLOW PIT CALCIUM BASE
		30700212	PULP & PAPER SULFITE PULPNG DIGSTR/BLOW PIT MGO W/RECVRY SYS
		30700213	PULP & PAPER SULFITE PULPNG DIGESTER/BLOW PIT MGO W/PROC CHG
		30700221	PULP & PAPER SULFITE PULPING RECOVERY SYSTEM MGO BASE
		30700222	PULP & PAPER SULFITE PULPING RECOVERY SYSTEM NH3 BASE
		30700231	PULP & PAPER SULFITE PULPING ACID PLANT NH3 BASE
		30700232	PULP & PAPER SULFITE PULPING ACID PLANT NA BASE
		30700233	PULP & PAPER SULFITE PULPING ACID PLANT CA BASE
		30700234	PULP & PAPER SULFITE PULPNG MISC SRC KNOTTERS/WASH/SCN
		30700299	PULP & PAPER SULFITE PULPING NOT CLASSIFIED SEE COMMENT **
		30700301	PULP & PAPER SEMICHEMICAL PULP DIGESTER/BLOW PIT GENERAL
		30700302	PULP & PAPER SEMICHEMICAL PULP EVAPORATOR GENERAL
		30700303	PULP & PAPER SEMICHEMICAL PULP FLUID BED REACTOR GENERAL
		30700304	PULP & PAPER SEMICHEMICAL PULP SULFUR BURN/ABSRB GENERAL
27120	NEWSPRINT INDUSTRY		
		30700897	WOOD PRODUCTS SAWMILL OPERATION NOT CLASSIFIED SEE COMMENT
		30700899	WOOD PRODUCTS SAWMILL OPERATION NOT CLASSIFIED SEE COMMENT
27130	PAPERBOARD INDUSTRY		
		10200692	EXT COM BOILER IND \NATURAL GAS \10 - 100 GJ/H \B.C.
		30700401	PULP & PAPER PULPBOARD PAPERBOARD GENERAL
		30700499	PULP & PAPER PULPBOARD NOT CLASSIFIED SEE COMMENT **
27200	ASPHALT ROOFING MANUFACTURES	10200404	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 5 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30501604	MINERAL PRODUCTS LIME MFG CALCINING ROTARY KILN
27300	PAPER BOX & BAG MANUFAFTURES	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30701399	PULP & PAPER MISC. PAPER PROD NOT CLASSIFIED SEE COMMENT
27400	OTHER PAPER CONVERTERS		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200504	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 4 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30101899	CHEM MFG PLASTICS PRODN NOT CLASSIFIED SEE COMMENTS
		30700499	PULP & PAPER PULPBOARD NOT CLASSIFIED SEE COMMENT **
		30701399	PULP & PAPER MISC. PAPER PROD NOT CLASSIFIED SEE COMMENT
		30800799	RUBBER/PLASTICS FAB.PLASTIC PROD NOT CLASSIFIED SEE COMMENT
		40200801	ORGANIC SOLVENT SURFACE COATING COATING OVEN GENERAL
		40201399	ORGANIC SOLVENT SURFACE COATING PAPER COATING SEE COMMENT
		40500701	PRINTING/PUBLISH PRINTING PROCESS SOLVENT STORAGE GENERAL
28600	COMMERCIAL PRINTING	10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
28700	ENGRAV. STEREOTYPING INDUSTRY	40500701	PRINTING/PUBLISH PRINTING PROCESS SOLVENT STORAGE GENERAL
28900	PRINTING & PUBLISHING	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL

SIC	SIC Name	SCC	SCC Name
28900	PRINTING & PUBLISHING		
		10200504	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 4 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		40500201	PRINTING/PUBLISH PRINTING PROCESS LETTER PRESS GENERAL
		40500501	PRINTING/PUBLISH PRINTING PROCESS ROTOGRAVURE GENERAL
29110	FERRO-ALLOYS MANUFACTURING	10200205	EXTCOMB BOILER INDUSTRIAL BITUMINOUS COAL OVERFEED STOKER
		30300311	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE COAL SCREENING
		30300399	PRIM METAL IRON & STEEL BY-PRODUCT COKE NOT CLASSIFIED **
		30300601	PRIMARY METALS FERROALLOY OPEN FURNACE 50% FESI
		30300602	PRIMARY METALS FERROALLOY OPEN FURNACE 75% FESI
		30300605	PRIMARY METALS FERROALLOY OPEN FURNACE SILICONMANGANESE
		30300610	PRIMARY METALS FERROALLOY OPEN FURNACE ORE SCREENING
		30300611	PRIMARY METALS FERROALLOY OPEN FURNACE ORE DRYER
		30300615	PRIMARY METALS FERROALLOY OPEN FURNACE FERROMANGANESE BF
		30300699	PRIMARY METALS FERROALLOY OPEN FURNACE NOT CLASSIFIED
29111	FERRO-ALLOYS INDUSTRY (FERROUS FOUNDRIES	00085100	FERROUS FOUNDRIES - INDUCTION FURNACE (HOT MELT)
		00085200	FERROUS FOUNDRIES - CUPOLA FURNACE (HOT MELT)
		00085300	FERROUS FOUNDRIES - ELECTRIC ARC FURNACE
29191	IRON AND STEEL PRODUCTION- IRON SMELTING	10100704	BLAST FURNACE GAS
		10200224	EXTCOMB BOILER INDUSTRIAL SUBBITUMINUS COAL SPREADER STOKER
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200504	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 4 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200704	EXTCOMB BOILER INDUSTRIAL PROCESS GAS BLAST FURNACE
		10200707	EXTCOMB BOILER INDUSTRIAL PROCESS GAS COKE OVEN
		30300616	PRIMARY METALS FERROALLOY OPEN FURNACE FERROSILICON BF
		30300617	PRIMARY METALS FERROALLOY OPEN FURNACE CAST HOUSE
		30300801	PRIMARY METALS IRON & STEEL BLAST FURNACE ORE CHARGE
		30300802	PRIMARY METALS IRON & STEEL BLAST FURNACE AGGLOMERATE CHARG
		30300812	PRIMARY METALS IRON & STEEL SINTERING RAW MATL TSFR/HDL
		30300817	PRIMARY METALS IRON & STEEL SINTERING COOLER
		30300825	PRIMARY METALS IRON & STEEL BLAST FURNACE CAST HOUSE
		30300907	PRIMARY METALS IRON & STEEL STEEL FURNACES TAPPING-ELECT.ARC
		30388801	PRIMARY METALS FUGITIVE EMISSION NOT CLASSIFIED SEE COMMENT
		30400301	PRIMARY METALS IRON/STEEL FOUNDY GRAY IRON FOUNDRY CUPOLA
		30400303	PRIM METAL IRON/STL FOUNDY GRAY IRN FOUND ELEC INDUCTION FN
		30400340	PRIM METAL IRON/STL FOUNDY GRAY IRN FOUND GRINDING/CLEANING
		30400350	PRIM METAL IRON/STL FOUNDY GRAY IRN FOUND SAND GRIND/HANDLE
		30400351	PRIM METAL IRON/STEEL FOUNDY GRAY IRON FOUNDRY CORE OVENS
		30400352	PRIM METAL IRON/STL FOUNDY GRAY IRN FOUND SAND GRIND/HANDLE
		30400360	PRIM METAL IRON/STL FOUNDY GRAY IRN FOUND CASTINGS FINISHNG
		30400399	PRIM METAL IRON/STL FOUNDY GRAY IRON FOUNDRY NOT CLASSIFIED
		30400701	PRIMARY METALS IRON/STEEL FOUNDY STEEL FOUNDRY ELEC ARC FURN
		30400709	PRIM METAL IRON/STEEL FOUNDY STEEL FOUNDRY CASTING SHAKEOUT
		30400711	PRIMARY METALS IRON/STEEL FOUNDY STEEL FOUNDRY CLEANING
		30400716	PRIM METAL IRON/STEEL FOUNDY STEEL FOUNDRY SAND GRIND/HANDLE
		30400799	PRIM METAL IRON/STEEL FOUNDY STEEL FOUNDRY NOT CLASSIFIED
		30501004	MINING OPERATIONS COAL CLEANING THERMAL DRYER ROTARY
		30900201	FABRICATED METALS ABRASIVE BLASTING OF METAL PARTS GENERAL
		30901601	FABRICATED METALS PIPE COATING ASPHALT DIPPING GENERAL
		40201601	ORGNC SOLVNT SRFACE COATNG AUTO/LGHT TRUCK PRIME EDP/DIP/SPY
		40201899	ORGANIC SOLVENT SURFACE COATING COIL COATING SEE COMMENT
29192	IRON & STEEL PROD. - STEEL INTEGRATION	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200404	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 5 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200704	EXTCOMB BOILER INDUSTRIAL PROCESS GAS BLAST FURNACE
		10200707	EXTCOMB BOILER INDUSTRIAL PROCESS GAS COKE OVEN
		10200799	EXTCOMB BOILER INDUSTRIAL PROCESS GAS OTHER/NOT CLASIFD
		10200802	EXTCOMB BOILER INDUSTRIAL COKE ALL BOILER SIZES
		10201002	EXTCOMB BOILER INDUSTRIAL LIQ PETROLEUM GAS PROPANE
		30300302	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE OVEN CHARGING
		30300303	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE OVEN PUSHING
		30300304	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE QUENCHING
		30300308	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE OVEN/DOOR LEAKS
		30300312	PRIM METAL IRON & STEEL BY-PRODUCT COKE CK CRSH/SCRN/HAND
		30300313	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE COAL PREHEATER
		30300315	PRIM METAL IRON & STEEL BY-PRODUCT COKE GAS BY-PROD PLANT
		30300401	PRIMARY METALS IRON & STEEL BEEHIVE COKE GENERAL
		30300509	PRIMARY METALS COPPER SMELTING FLUIDIZED-BED ROASTER
		30300699	PRIMARY METALS FERROALLOY OPEN FURNACE NOT CLASSIFIED

SIC	SIC Name	SCC	SCC Name
29192	IRON & STEEL PROD. - STEEL INTEGRATION	30300799	FERROALLOYS MANUFACTURES AGGLOMERATION
		30300801	PRIMARY METALS IRON & STEEL BLAST FURNACE ORE CHARGE
		30300819	PRIMARY METALS IRON & STEEL SINTERING PROCESSING
		30300823	PRIMARY METALS IRON & STEEL BLAST FURNACE CHRG MAT TSFR/HDL
		30300824	PRIMARY METALS IRON & STEEL BLAST FURNACE BLAST HEATG STOVE
		30300825	PRIMARY METALS IRON & STEEL BLAST FURNACE CAST HOUSE
		30300901	PRIMARY METALS IRON & STEEL STEEL FURNACES OP.HEARTH FURNACE
		30300912	PRIMARY METALS IRON & STEEL STEEL ROLL/FINISH GRINDING
		30300913	PRIMARY METALS IRON & STEEL STEEL FURNACES BASIC OX FURN-OPN
		30300914	PRIMARY METALS IRON & STEEL STEEL FURNACES BASIC OX FURN-CLD
		30300915	PRIMARY METALS IRON & STEEL STEEL FURNACES HOT METAL TRANSFR
		30300916	PRIMARY METALS IRON & STEEL STEEL FURNACES CHARGING BOF
		30300923	PRIMARY METALS IRON & STEEL STEEL FURNACES ST FURN SLAG TPDP
		30300924	PRIMARY METALS IRON & STEEL STEEL FURNACES ST FURN SLAG PCS
		30300925	PRIMARY METALS IRON & STEEL STEEL CASTING TEEMING-PB STEEL
		30300931	PRIMARY METALS IRON & STEEL STEEL ROLL/FINISH HOT ROLLING
		30300932	PRIMARY METALS IRON & STEEL STEEL ROLL/FINISH SCARFING
		30300933	PRIM METAL IRON & STEEL STEEL ROLL/FINISH REHEAT FURNACES
		30300934	PRIM METAL IRON & STEEL STEEL ROLL/FINISH HEAT TR FURN ANNL
		30300936	PRIM METAL IRON & STEEL STEEL ROLL/FINISH COATING (TN/ZINC)
		30300999	PRIMARY METALS IRON & STEEL NOT CLASSIFIED SEE COMMENT
		30388801	PRIMARY METALS FUGITIVE EMISSION NOT CLASSIFIED SEE COMMENT
		30390004	PRIMARY METALS FUEL-FIRED EQPMNT PROCESS HEATERS PROCESS GAS
		30390024	PRIMARY METALS FUEL-FIRED EQPMNT FLARES PROCESS GAS
		30400301	PRIMARY METALS IRON/STEEL FOUNDY GRAY IRON FOUNDRY CUPOLA
		30400303	PRIM METAL IRON/STL FOUNDY GRAY IRN FOUND ELEC INDUCTION FN
		30400304	PRIM METAL IRON/STEEL FOUNDY GRAY IRON FOUNDRY ELEC ARC FURN
		30400320	PRIM METAL IRON/STL FOUNDY GRAY IRON FOUNDRY POURING/CASTING
		30400331	PRIM METAL IRON/STL FOUNDY GRAY IRN FOUNDRY CASTNG SHAKEOUT
		30400340	PRIM METAL IRON/STL FOUNDY GRAY IRN FOUND GRINDING/CLEANING
		30400342	PRIM METAL IRON/STL FOUNDY GRAY IRN FOUND CASTNG CLNG/CHPRS
		30400701	PRIMARY METALS IRON/STEEL FOUNDY STEEL FOUNDRY ELEC ARC FURN
		30400708	PRIM METAL IRON/STEEL FOUNDY STEEL FOUNDRY POURING/CASTING
		30400799	PRIM METAL IRON/STEEL FOUNDY STEEL FOUNDRY NOT CLASSIFIED
		30501203	MINERAL PRODUCTS FIBERGLASS WOOL-TYPE FIBER ELECTRIC FURNACE
		30501604	MINERAL PRODUCTS LIME MFG CALCINING ROTARY KILN
		30501607	MINERAL PRODUCTS LIME MFG RAW MATERIAL TRANSFER/CONVEY
		30501613	MINERAL PRODUCTS LIME MFG LIME SILOS
29193	IRON & STEEL PROD-COKE OVEN BLAST FURNAC	10200707	EXTCOMB BOILER INDUSTRIAL PROCESS GAS COKE OVEN
		30300302	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE OVEN CHARGING
		30300303	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE OVEN PUSHING
		30300304	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE QUENCHING
		30300305	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE COAL UNLOADING
		30300306	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE OVEN UNDERFIRING
		30300310	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE COAL CRUSHING
		30300312	PRIM METAL IRON & STEEL BY-PRODUCT COKE CK CRSH/SCRN/HAND
		30300315	PRIM METAL IRON & STEEL BY-PRODUCT COKE GAS BY-PROD PLANT
		30300316	PRIM METAL IRON & STEEL BY-PRODUCT COKE COAL STORAGE PILE
29195	IRON & STEEL PROD.- NON INTEGRATED STEEL	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		30400304	PRIM METAL IRON/STEEL FOUNDY GRAY IRON FOUNDRY ELEC ARC FURN
29196	IRON & STEEL PROD.- ELECTRIC ARC FURNACE	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
		30300823	PRIMARY METALS IRON & STEEL BLAST FURNACE CHRG MAT TSFR/HDL
		30300904	PRIMARY METALS IRON & STEEL STEEL FURNACES EAF- ALLOY STEEL
		30300905	PRIMARY METALS IRON & STEEL FURNACES ELECTRIC ARC FURNACE
		30300906	PRIMARY METALS IRON & STEEL STEEL FURNACES CHARGING-ELEC.ARC
		30300908	PRIMARY METALS IRON & STEEL STEEL FURNACES EAF- CARBON STEEL
		30388801	PRIMARY METALS FUGITIVE EMISSION NOT CLASSIFIED SEE COMMENT
		30400304	PRIM METAL IRON/STEEL FOUNDY GRAY IRON FOUNDRY ELEC ARC FURN
29198	IRON & STEEL ANCILARY OPERATION GENERAL	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		30300922	PRIMARY METALS IRON & STEEL STEEL FURNACES CONTINUOUS CASTNG
		30300932	PRIMARY METALS IRON & STEEL STEEL ROLL/FINISH SCARFING
		30300933	PRIM METAL IRON & STEEL STEEL ROLL/FINISH REHEAT FURNACES
		30300999	PRIMARY METALS IRON & STEEL NOT CLASSIFIED SEE COMMENT
		30400301	PRIMARY METALS IRON/STEEL FOUNDY GRAY IRON FOUNDRY CUPOLA
29199	IRON & STEEL ANCILLIARY (POWDER)	30300802	PRIMARY METALS IRON & STEEL BLAST FURNACE AGGLOMERATE CHARG
29210	STEEL PIPE AND TUBE INDUSTRY	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL

SIC	SIC Name	SCC	SCC Name
29210	STEEL PIPE AND TUBE INDUSTRY	10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30900201	FABRICATED METALS ABRASIVE BLASTING OF METAL PARTS GENERAL
		30901102	FAB METAL CONVERSION COATNG ACID CLEANING BATH(PICKLING)
		30901601	FABRICATED METALS PIPE COATING ASPHALT DIPPING GENERAL
		40200101	ORGNC SOLVNT SURFACE COATING PAINT-GENERAL SOLVENT-BASE CTNG
29510	ALUMINA FROM BAUXITE	30300001	MINING OPERATIONS METAL ORE MINING BAUXITE CRUSHING/HANDLING
		30300002	MINING OPERATIONS METAL ORE MINING BAUXITE DRYING OVEN
		30300099	PRIM METAL PRODCTN - ALUMINUM ORE - BAUXITE - NOT CLASSIFIED
		30300104	PRIMARY METALS ALUMINUM ELECTRO-REDUCTION MATERIALS HANDLNG
		30300199	PRIMARY METALS ALUMINUM ELECTRO-REDUCTION NOT CLASSIFIED **
		30300201	PRIMARY METALS ALUMINUM HYDROXIDE CALCING OVERALL PROCESS
29511	ALUMINUM FROM ALUMINA	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200404	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 5 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
		10200704	EXTCOMB BOILER INDUSTRIAL PROCESS GAS BLAST FURNACE
		10200799	EXTCOMB BOILER INDUSTRIAL PROCESS GAS OTHER/NOT CLASIFD
		10300691	EXT COM BOILER COMM-INST \NATURAL GAS \100+ GJ/H \B.C.
		30300101	PRIMARY METALS ALUMINUM ELECTRO-REDUCTION PREBAKED CELL
		30300102	PRIMARY METALS ALUMINUM ELECTRO-REDUCTION HORIZSTD SODERBRG
		30300103	PRIMARY METALS ALUMINUM ELECTRO-REDUCTION VERTSTD SODERBERG
		30300104	PRIMARY METALS ALUMINUM ELECTRO-REDUCTION MATERIALS HANDLNG
		30300105	PRIMARY METALS ALUMINUM ELECTRO-REDUCTION ANODE BAKE FURNCE
		30300107	PRIMARY METALS ALUMINUM ELECTRO-REDUCTION ROOF VENTS
		30300110	PRIMARY METALS ALUMINUM ELECTRO-REDUCTION VERTL.SS-FUGITIVE
		30300191	IND PROCESS PRIM MTLS\AL ELECT REDUC\COKE CALCINING
		30300192	IND PROCESS PRIM MTLS\AL ELECT REDUC\COOLER FOR CALCINER
		30300193	IND PROCESS PRIM MTLS\AL CASTING\GAS FIRED
		30300199	PRIMARY METALS ALUMINUM ELECTRO-REDUCTION NOT CLASSIFIED **
		30300304	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE QUENCHING
		30300901	PRIMARY METALS IRON & STEEL STEEL FURNACES OP.HEARTH FURNACE
		30300907	PRIMARY METALS IRON & STEEL STEEL FURNACES TAPPING-ELECT.ARC
		30300999	PRIMARY METALS IRON & STEEL NOT CLASSIFIED SEE COMMENT
		30390003	PRIMARY METALS FUEL-FIRED EQPMNT PROCESS HEATERS NAT GAS
		30400101	SECONDARY METALS SEC. ALUMINUM SWEATING FURNACE
		30400102	SECONDARY METALS SEC. ALUMINUM SMELTING FURNACE CRUCIBLE
		30400110	SECONDARY METALS SEC. ALUMINUM FOIL ROLLING
		30400112	SECONDARY METALS SEC. ALUMINUM ANNEALING FURNACE
		30400150	SECONDARY METALS SEC. ALUMINUM ROLL/DRAW EXTRUDE
		30400239	SECONDARY METALS SEC. COPPER CASTING OPERATION FUGITIVE
		30400601	PRIMARY METALS MAGNESIUM POT FURNACE NO CONTROLS
		30400873	SECONDARY METALS SECONDARY ZINC FUGITIVE EMISSION CASTING
		30900299	FABRICATED METALS ABRASIVE BLASTING OF METAL PARTS GENERAL
		40201601	ORGNC SOLVNT SRFACE COATNG AUTO/LGHT TRUCK PRIME EDP/DIP/SPY
		40201702	ORGNC SOLVNT SURFACE COATING CAN COATING CLEAN/PRETREATMNT
		40201723	ORGNC SOLVNT SURFACE COATING CAN COATING SHEET BASECT(INT)
29512	ALUMINUM FLUORIDE PRODUCTION	10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		30101203	CHEM MFG INORGANIC CHEMCLS HFLUORIC ACID FLUORSPAR DRYING
		30101204	CHEM MFG INORGANIC CHEMCLS HFLUORIC ACID SPAR HANDLG SILOS
		30300099	PRIM METAL PRODCTN - ALUMINUM ORE - BAUXITE - NOT CLASSIFIED
		30300199	PRIMARY METALS ALUMINUM ELECTRO-REDUCTION NOT CLASSIFIED **
29590	CU SMELTING+REFINING	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
		10200603	EXTCOMB BOILER INDUSTRIAL NATURAL GAS <10MMBTU/HR
		10200802	EXTCOMB BOILER INDUSTRIAL COKE ALL BOILER SIZES
		20100102	INTERNLCOMBUSTION ELEC GEN. DIST.OIL/DIESEL RECIPROCATING
		30102306	CHEM MFG INORGANIC CHEMCLS H2SO4-CONTACT ABSRBR 99.0% CONV
		30300502	PRIMARY METALS COPPER SMELTING MULTIPLE HEARTH ROASTER
		30300503	PRIM METAL COPPER SMELTING REVERB SMELT FURN AFTER ROASTER
		30300504	PRIMARY METALS COPPER SMELTING CONVERTER AVG. ALL CONFIGRT
		30300506	PRIMARY METALS COPPER SMELTING ORE CONCENTRATE DRYER
		30300507	IRON/STL COPPER SMELTING REVERB SMELT FURN WITHOUT ROASTING
		30300513	IRON/STL COPPER SMELTING FUGITIVE EMISSION ROASTER DISCHARGE
		30300514	IRON/STL COPPER SMELTING FUGITIVE EMISSION SMELTING FURNACE
		30300515	PRIMARY METALS COPPER SMELTING FUGITIVE EMISSION CONVERTERS
		30300516	IRON/STL COPPER SMELTING FUGITIVE EMISSION ANODE REFINE FURN
		30300523	PRIMARY METALS COPPER SMELTING CONVERTER AFTER REVERB FURN
		30300599	PRIMARY METALS COPPER SMELTING NOT CLASSIFIED SEE COMMENTS
		30301102	MINING OPER METAL ORE MINING MOLYBEDENUM MILLING-GENERAL

SIC	SIC Name	SCC	SCC Name
29590	CU SMELTING+REFINING		
		30302401	IRON/STL NS METAL ORE MNG LOW MOISTURE ORE PRIMARY CRUSHING
		30302402	MINING OPER METAL ORE MNG LOW MOISTURE ORE SECONDRY CRUSHING
		30302404	MINING OPER METAL ORE MNG LOW MOISTURE ORE MATERIAL HANDLING
		30302408	MINING OPER METAL ORE MNG HIGH MOISTURE ORE MATERIAL HANDLNG
		30302411	MINING OPER METAL ORE MNG DRYING-ALL MINERL BUT TI/ZR SANDS
		30302499	METAL MINING GEN PROCESS\NOT CLASSIFIED
		30399999	PRIMARY METALS MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
		30400807	SECONDARY METALS SECONDARY ZINC CONCENTRATE DRYER
		30501613	MINERAL PRODUCTS LIME MFG LIME SILOS
29592	NI SMELTING+REFINING		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200504	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 4 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
		10201002	EXTCOMB BOILER INDUSTRIAL LIQ PETROLEUM GAS PROPANE
		30300503	PRIM METAL COPPER SMELTING REVERB SMELT FURN AFTER ROASTER
		30300504	PRIMARY METALS COPPER SMELTING CONVERTER AVG. ALL CONFIGRT
		30300509	PRIMARY METALS COPPER SMELTING FLUIDIZED-BED ROASTER
		30303002	PRIMARY METALS ZINC SMELTING ROASTING MULTIPLE HEARTH
		30388801	PRIMARY METALS FUGITIVE EMISSION NOT CLASSIFIED SEE COMMENT
		30401008	PRIMARY METALS NICKEL ELECT ARC FURNACE W/
		30401099	PRIMARY METALS NICKEL NOT CLASSIFIED SEE COMMENT
29800	METAL ROLLING CASTING, EXTRUDING	10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
29990	PB SMELTING+REFINING		
		30301001	PRIMARY METALS LEAD SMELTING SINTERING SINGLE STREAM
		30301002	PRIMARY METALS LEAD SMELTING BLAST FURNACE OPERATION
		30301005	PRIMARY METALS LEAD SMELTING MATERIALS HANDLNG GENERAL
		30301008	PRIMARY METALS LEAD SMELTING SLAG FUME FURNACE
		30301016	PRIMARY METALS LEAD SMELTING SINTERING TRANSFER
		30301019	PRIMARY METALS LEAD SMELTING BLAST FURNACE TAPPING METAL/SLG
		30301022	PRIMARY METALS LEAD SMELTING LEAD REFINING AG RETORT BLDG
		30301023	PRIMARY METALS LEAD SMELTING LEAD CASTING
		30301025	PRIMARY METALS LEAD SMELTING SINTERING MACHINE LEAKAGE
		30301026	PRIMARY METALS LEAD SMELTING SINTERING PRODUCT DUMP AREA
		30301099	PRIM METAL LEAD SMELTING NOT CLASSIFIED SEE COMMENT **
		30302402	MINING OPER METAL ORE MNG LOW MOISTURE ORE SECONDRY CRUSHING
		30302404	MINING OPER METAL ORE MNG LOW MOISTURE ORE MATERIAL HANDLING
		30302408	MINING OPER METAL ORE MNG HIGH MOISTURE ORE MATERIAL HANDLNG
		30302411	MINING OPER METAL ORE MNG DRYING-ALL MINERL BUT TI/ZR SANDS
		30303099	PRIM METAL ZINC SMELTING NOT CLASSIFIED SEE COMMENT **
		30399999	PRIMARY METALS MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
		30400412	SECND METALS SEC. LEAD FUGITIVE EMISSION SWEATING FURNACE
		30501609	MINERAL PRODUCTS LIME MFG HYDRATOR ATMOSPHERIC
		30501699	MINERAL PRODUCTS LIME MFG NOT CLASSIFIED SEE COMMENT **
29992	ZN SMELTING+REFINING		
		30102399	CHEM MFG INORGANIC CHEMCLS H2SO4-CONTACT NOT CLASSIFIED **
		30303008	PRIMARY METALS ZINC SMELTING ROASTING FLUID BED
		30303009	PRIMARY METALS ZINC SMELTING RAW MATERIAL HANDLING/TRANSFER
		30303011	PRIMARY METALS ZINC SMELTING ZINC CASTING
		30303012	PRIMARY METALS ZINC SMELTING RAW MATERIAL UNLOADING
		30303015	PRIMARY METALS ZINC SMELTING ZINC MELTING
		30303099	PRIM METAL ZINC SMELTING NOT CLASSIFIED SEE COMMENT **
		30400834	SECONDARY METALS SEC. ZINC KETTLE-SWEAT FURN RESIDUAL SCRAP
30110	POWER BOILER AND HEAT EXCHANGER INDUSTRY	30400304	PRIM METAL IRON/STEEL FOUNDY GRAY IRON FOUNDRY ELEC ARC FURN
		30400331	PRIM METAL IRON/STL FOUNDY GRAY IRN FOUNDRY CASTNG SHAKEOUT
		30400352	PRIM METAL IRON/STL FOUNDY GRAY IRN FOUND SAND GRIND/HANDLE
		30400399	PRIM METAL IRON/STL FOUNDY GRAY IRON FOUNDRY NOT CLASSIFIED
30200	FABRIC STRUCTURE METAL INDUSTRY	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30400701	PRIMARY METALS IRON/STEEL FOUNDY STEEL FOUNDRY ELEC ARC FURN
30290	OTHER FABRICATED STRUCTURAL METAL PROD.	31299999	MACHINERY MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
30400	METAL STAMP. PRESS & COATING	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10201002	EXTCOMB BOILER INDUSTRIAL LIQ PETROLEUM GAS PROPANE
		30400799	PRIM METAL IRON/STEEL FOUNDY STEEL FOUNDRY NOT CLASSIFIED
		30402210	SECONDARY METALS METAL HEAT TREATG QUENCH BATH
		30701399	PULP & PAPER MISC. PAPER PROD NOT CLASSIFIED SEE COMMENT
		40200401	ORGANIC SOLVENT SURFACE COATING LACQUER GENERAL

SIC	SIC Name	SCC	SCC Name
30400	METAL STAMP. PRESS & COATING	40200801	ORGANIC SOLVENT SURFACE COATING COATING OVEN GENERAL
		40201431	ORGNC SOLVNT SURFACE COATING LARGE APPLIANCES COATING LINE
		40201727	ORGANIC SOLVENT SURFACE COATING CAN COATING LITHOGRAPHY
		40201735	ORGANIC SOLVENT SURFACE COATING CAN COATING 2-PC CAN COATING
		40202501	ORGNC SOLVNT SURFACE COATNG MISC.METAL PARTS COATNG OPERATN
		40202599	ORGANIC SOLVENT SURFACE COATING MISC.METAL PARTS SEE COMMENT
		40500101	PRINTING/PUBLISH PRINTING PROCESS DRYER GENERAL
30500	WIRE & WIRE PROD. MANUFACTURES	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10201002	EXTCOMB BOILER INDUSTRIAL LIQ PETROLEUM GAS PROPANE
30700	HEATING EQUIPMENT MANUFACTURES	10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		40202601	ORGNC SOLVNT SURFACE COATING STEEL DRUMS COATING OPERATION
30900	MISC. METAL FABRIC. INDUSTRY	10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30103507	CHEM MFG INORGNC CHEMCLS INORGANIC PIGMENT PB OXIDE-CALCINER
		30400101	SECONDARY METALS SEC. ALUMINUM SWEATING FURNACE
		30400102	SECONDARY METALS SEC. ALUMINUM SMELTING FURNACE CRUCIBLE
		30400108	SECONDARY METALS SEC. ALUMINUM CRUSHING/SCREENNG
		30400109	SECONDARY METALS SEC. ALUMINUM BURNING/DRYING
		30400110	SECONDARY METALS SEC. ALUMINUM FOIL ROLLING
		30400112	SECONDARY METALS SEC. ALUMINUM ANNEALING FURNACE
		30400120	SECONDARY METALS SEC. ALUMINUM CAN MANUFACTURE
		30400150	SECONDARY METALS SEC. ALUMINUM ROLL/DRAW EXTRUDE
		30400239	SECONDARY METALS SEC. COPPER CASTING OPERATION FUGITIVE
		30400401	SECONDARY METALS SEC. LEAD KETTLE REFINING POT FURNACE
		30400403	SECONDARY METALS SEC. LEAD SMELTING FURNACE BLAST(CUPOLA)
		30400413	SECND METALS SEC. LEAD FUGITIVE EMISSION SMELTING FURNACE
		30400499	SECONDARY METALS SEC. LEAD NOT CLASSIFIED SEE COMMENT
		30402210	SECONDARY METALS METAL HEAT TREATG QUENCH BATH
		30902501	FABRICATED METALS DRUMS/BARRELS DRUM CLEANING DRUM BURNING
		40201799	ORGANIC SOLVENT SURFACE COATING CAN COATING SEE COMMENT
		40202501	ORGNC SOLVNT SURFACE COATNG MISC.METAL PARTS COATNG OPERATN
		40202599	ORGANIC SOLVENT SURFACE COATING MISC.METAL PARTS SEE COMMENT
31100	AGRICULTURAL IMPLEMENT INDUSTRY	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30402210	SECONDARY METALS METAL HEAT TREATG QUENCH BATH
		30900201	FABRICATED METALS ABRASIVE BLASTING OF METAL PARTS GENERAL
		40200101	ORGNC SOLVNT SURFACE COATING PAINT-GENERAL SOLVENT-BASE CTNG
		40202532	ORGNC SOLVNT SURFACE COATNG MISC.METAL PARTS CONVR SNGL DIP
		40202533	ORGNC SOLVNT SURFACE COATNG MISC.METAL PART CONVR SNGL SPRY
		40202599	ORGANIC SOLVENT SURFACE COATING MISC.METAL PARTS SEE COMMENT
31500	MISC. MACHINERY EQUIPMENT	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
31800	OFFICE, STORE MACHINERY	10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		40200101	ORGNC SOLVNT SURFACE COATING PAINT-GENERAL SOLVENT-BASE CTNG
32100	AIRCRAFT & PARTS MANUFACTURE	10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
32300	MOTOR VEHICLE MANUFACTURE	10200201	EXTCOMB BOILER INDUSTRIAL BITUMINOUS COAL PULV COAL WET BOT
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30400113	SECONDARY METALS SEC. ALUMINUM SLAB FURNACE
		30400210	SECONDARY METALS SEC. COPPER CUPOLA SCRAP CU CHARGE
		30400708	PRIM METAL IRON/STEEL FOUNDY STEEL FOUNDRY POURING/CASTING
		30405001	SECONDRY METALS MISC CAST/FABRCTN NOT CLASSIFIED SEE COMMENT
		30510103	MINERAL PRODUCTS BULK MATERIALS CONVEYORS COAL
		40201601	ORGNC SOLVNT SRFACE COATNG AUTO/LGHT TRUCK PRIME EDP/DIP/SPY
		40201620	ORGNC SOLVNT SURFACE COATNG AUTOS/LIGHT TRUCK REPAIR TOPCOAT
32310	MOTOR VEHICLE INDUSTRY	31499999	TRANSPORTN EQPMNT MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
		40200101	ORGNC SOLVNT SURFACE COATING PAINT-GENERAL SOLVENT-BASE CTNG
		40201627	ORGNC SOLVNT SURFACE COATNG LGHT DUTY TRUCK PRIMECOAT-SOLVNT
		40201699	ORGNC SOLVNT SURFACE COATING AUTOS/LIGHT TRUCK SEE COMMENT
32500	MOTOR VEHICLE PARTS, ACCESSORIES	10200201	EXTCOMB BOILER INDUSTRIAL BITUMINOUS COAL PULV COAL WET BOT

SIC	SIC Name	SCC	SCC Name
32500	MOTOR VEHICLE PARTS, ACCESSORIES	10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30400711	PRIMARY METALS IRON/STEEL FOUNDY STEEL FOUNDRY CLEANING
		31400901	TRANSPTN EQPMNT GENERAL PROCESS SOLDER JOINT GRINDNG OPERATN
		40200301	ORGANIC SOLVENT SURFACE COATING VARNISH/SHELLAC GENERAL
		40201622	ORGANIC SOLVENT SURFACE COATING AUTOMOBILE PRIMECOAT-ELECTDP
		40201627	ORGNC SOLVNT SURFACE COATNG LGHT DUTY TRUCK PRIMECOAT-SOLVNT
		40202201	ORGNC SOLVNT SURFACE COATING PLASTIC PARTS COATING OPERATION
32600	RAILROAD ROLL. STOCK INDUSTRY	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		31499999	TRANSPORTN EQPMNT MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
		40200101	ORGNC SOLVNT SURFACE COATING PAINT-GENERAL SOLVENT-BASE CTNG
		40200601	ORGANIC SOLVENT SURFACE COATING PRIMER GENERAL
32710	SHIPBUILDING AND REPAIR INDUSTRY	10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		40202399	ORGANIC SOLVENT SURFACE COATING LARGE SHIPS SEE COMMENT
32900	MISC. VEHICLE MANUFACTURE	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
33200	MAJOR APPLIANCES	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
33600	ELECT. INDUSTRIAL EQUIPMENT	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
33700	BATTERY MANUFACTURER	10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30400505	ELEC EQPMNT LEAD BATTERY MFG ENTIRE PROCESS TOTAL
33790	OTHER ELECTRICAL INDUSTRIAL EQUIPMENT	31307001	ELEC EQPMNT WINDINGS RECLAMTN INCINERTR OVEN SINGLE CHAMBER
		31307002	ELEC EQPMNT WINDNGS RECLAMTN INCINERTR OVEN MULTIPLE CHAMBER
33800	ELECTRIC WIRE & CABLE	10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		40201501	ORGANIC SOLVENT SURFACE COATING MAGNET WIRE APPLICATN/CURING
		40201502	ORGNC SOLVNT SURFACE COATING MAGNET WIRE CLEAN/PRETREATMNT
		40201503	ORGANIC SOLVENT SURFACE COATING MAGNET WIRE COATING MIXING
		40201599	ORGANIC SOLVENT SURFACE COATING MAGNET WIRE SEE COMMENT
33900	MISC. ELECTRICAL PRODUCTS	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200404	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 5 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30900298	FABRICATED METALS ABRASIVE BLASTING OF METAL PARTS GENERAL
		30906001	FAB METAL PORCELAIN ENAMEL/ CERAMIC GLAZE SPRAY BOOTH
		40202531	ORGNC SOLVNT SURFACE COATNG MISC.METAL PART CONVR SNGL FLOW
		40202534	ORGNC SOLVNT SRFACE COATNG MISC.METAL PRTS 2-COAT FLOW/SPRAY
		40202599	ORGANIC SOLVENT SURFACE COATING MISC.METAL PARTS SEE COMMENT
33990	CARBON+GRAPHITE ELECTRODE	30300199	PRIMARY METALS ALUMINUM ELECTRO-REDUCTION NOT CLASSIFIED **
		30300306	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE OVEN UNDERFIRING
		30402004	ELEC EQPMNT FURNACE ELECTRODE BAKE FURNACES
35111	CLAY PRODUCT INDUSTRY	00053110	CLAY PRODUCTS MANUFACTURE - CLAY PRODUCTION - DRYER -
		00053120	CLAY PRODUCTS MANUFACTURE - CLAY PRODUCTION - STORAGE
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30400299	SECONDARY METALS SEC. COPPER NOT CLASSIFIED SEE COMMENT
		30500301	MINERAL PRODUCTS BRICK MFG RAW MATERIAL DRYING
		30500307	MINERAL PRODUCTS BRICK MFG CALCINING
		30500311	MINERAL PRODUCTS BRICK MFG TUNNEL KILNS GAS-FIRED
		30500801	MINERAL PRODUCTS CERAMIC CLAY MFG DRYING
		30500802	MINERAL PRODUCTS CERAMIC CLAY MFG GRINDING
		30500899	MINERAL PRODUCTS CERAMIC CLAY MFG NOT CLASSIFIED SEE COMMENT
		30590003	MINERAL PRODUCTS FUEL-FIRED EQPMNT PROCESS HEATERS NAT GAS
		40200501	ORGANIC SOLVENT SURFACE COATING ENAMEL GENERAL
35210	CEMENT MANUFACTURE	10200202	EXTCOMB BOILER INDUSTRIAL BITUMINOUS COAL PULV COAL DRY BOT
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
		30500606	MINERAL PRODUCTS CEMENT MFG DRY PROCESS KILNS

SIC	SIC Name	SCC	SCC Name
35210	CEMENT MANUFACTURE		
		30500609	MINERAL PRODUCTS CEMENT MFG DRY PROCESS PRIMARY CRUSHING
		30500612	MINERAL PRODUCTS CEMENT MFG DRY PROCESS RAW MAT TRANSFER
		30500613	MINERAL PRODUCTS CEMENT MFG DRY PROCESS RAW MAT GRIND/DRY
		30500614	MINERAL PRODUCTS CEMENT MFG DRY PROCESS CLINKER COOLER
		30500617	MINERAL PRODUCTS CEMENT MFG DRY PROCESS CLINKER GRINDING
		30500618	MINERAL PRODUCTS CEMENT MFG DRY PROCESS CEMENT SILOS
		30500619	MINERAL PRODUCTS CEMENT MFG DRY PROCESS CEMENT LOAD OUT
		30500706	MINERAL PRODUCTS CEMENT MFG WET PROCESS KILNS
		30500707	MINERAL PRODUCTS CEMENT MFG WET PROCESS RAW MAT UNLOADING
		30500712	MINERAL PRODUCTS CEMENT MFG WET PROCESS RAW MAT TRANSFER
		30500714	MINERAL PRODUCTS CEMENT MFG WET PROCESS CLINKER COOLER
		30500717	MINERAL PRODUCTS CEMENT MFG WET PROCESS CLINKER GRINDING
		30500718	MINERAL PRODUCTS CEMENT MFG WET PROCESS CEMENT SILO
		30500719	MINERAL PRODUCTS CEMENT MFG WET PROCESS CEMENT UNLOADING
		30500799	MINERAL PRODUCTS CEMENT MFG WET PROCESS NOT CLASSIFIED **
		39000201	INDSTRL PROC INPROCES FUEL BITUMINOUS COAL CEMENT KILN/DRYER
		39000602	INDSTRL PROC INPROCESS FUEL NATURAL GAS CEMENT KILN/DRYER
		39000899	INDUSTRIAL PROCES INPROCESS FUEL COKE NOT CLASSIFIED
35400	MINERAL WOOL		
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200802	EXTCOMB BOILER INDUSTRIAL COKE ALL BOILER SIZES
		30503201	MINING OPER NONMETALLIC MINRL ASBESTOS MILLING CRUSHING
		30503202	MINING OPERATIONS NONMETALLIC MINRL ASBESTOS MILLING DRYING
		30503205	MINING OPER NONMETALLIC MINRL ASBESTOS MILLING FIBERIZING
		30503299	METAL ORE MNG TALLIC MINRL ASBESTOS MILLING NOT CLASSIFIED
35510	READY-MIX CONCRETE INDUSTRY		
		00055100	CONCRETE BATCHING
		00055200	CONCRETE BATCHING - FUGITIVE (MATERIAL HANDLING)
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200693	EXT COM BOILER IND \NATURAL GAS \-10 GJ/H \B.C.
		10300501	EXTCOMB BOILER COM-INSTUTNL DISTILLATE OIL NO 1 AND NO 2 OIL
		10300693	EXT COM BOILER COMM-INST \NATURAL GAS \-10 GJ/H \B.C.
		30500394	IND PROCESS MIN PROD\BRICK MFG\CURE/FIRE GAS PERIODIC
		30501101	MINERAL PRODUCTS CONCRETE BATCHING GENERAL
		30501107	MINRL PROD CONCRETE BATCHING CEMENT UNLOADING ELEVATED SILOS
		30501109	MINERAL PRODUCTS CONCRETE BATCHING MIXER LOADING
		30501115	MINERAL PRODUCTS CONCRETE BATCHING STORAGE BINS/HOPPERS
		30501199	MINRL PROD CONCRETE BATCHING NOT CLASSIFIED SEE COMMENT
		30502510	MINING OPERATIONS NONMETALLIC MINRL SAND/GRAVEL CRUSHING
35620	GLASS MANUFACTURE		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30501402	MINERAL PRODUCTS GLASS MFG CONTAINER GLASS MELTING FURNACE
		30501403	MINERAL PRODUCTS GLASS MFG FLAT GLASS MELTING FURNACE
		30501404	MINERAL PRODUCTS GLASS MFG PRESS/BLOWN GLASS MELTING FURNACE
		30501410	MINERAL PRODUCTS GLASS MFG RAW MATL HANDLING GENERAL
		30501499	MINERAL PRODUCTS GLASS MFG NOT CLASSIFIED SEE COMMENT **
		30502501	MINING OPER NONMETALLIC MINRL SAND/GRAVEL TOTAL PLNT-GENL**
35711	SILICON CARBIDE (ABRASIVES MANUFATURE)		
		10200404	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 5 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10201002	EXTCOMB BOILER INDUSTRIAL LIQ PETROLEUM GAS PROPANE
		30300523	PRIMARY METALS COPPER SMELTING CONVERTER AFTER REVERB FURN
		30400108	SECONDARY METALS SEC. ALUMINUM CRUSHING/SCREENNG
		30400199	SECONDARY METALS SEC. ALUMINUM NOT CLASSIFIED SEE COMMNT **
		30500401	MINERAL PRODUCTS CALCIUM CARBIDE ELECTRIC FURNACE
		30500402	MINERAL PRODUCTS CALCIUM CARBIDE COKE DRYER
		30500406	MINERAL PRODUCTS CALCIUM CARBIDE CIRCULAR CHARGING CONVEYOR
		30500502	MINRL PROD CASTABLE REFRACTY RAW MATERIAL CRUSH/PROCESS
		30500504	MINERAL PRODUCTS CASTABLE REFRACTY CURING OVEN
		30500599	MINRL PROD CASTABLE REFRACTY NOT CLASSIFIED SEE COMMENT
		30599999	MINERAL PRODUCTS MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
35810	LIME MANUFACTURE		
		10300221	EXTCOMB BOILR COM-INSTUTNL SUBBITUMNS COAL PULV COAL WET BOT
		30501601	MINERAL PRODUCTS LIME MFG PRIMARY CRUSHING
		30501602	MINERAL PRODUCTS LIME MFG SECOND CRUSH/SCRN
		30501603	MINERAL PRODUCTS LIME MFG CALCINING VERTICAL KILN
		30501604	MINERAL PRODUCTS LIME MFG CALCINING ROTARY KILN
		30501607	MINERAL PRODUCTS LIME MFG RAW MATERIAL TRANSFER/CONVEY
		30501609	MINERAL PRODUCTS LIME MFG HYDRATOR ATMOSPHERIC
		30501611	MINERAL PRODUCTS LIME MFG PRODUCT COOLER

SIC	SIC Name	SCC	SCC Name
35810	LIME MANUFACTURE		
		30501615	MINERAL PRODUCTS LIME MFG PRODUCT TRAN/CONV
		30501617	MINERAL PRODUCTS LIME MFG CALCINING MULTIPLE HEARTH
		30501699	MINERAL PRODUCTS LIME MFG NOT CLASSIFIED SEE COMMENT **
35900	OTHER NON-METAL MINERAL		
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30500101	PETROLEUM INDRY ASPHALT ROOFING ASPHALT BLOWING SATURANT
		30500102	PETROLEUM INDRY ASPHALT ROOFING ASPHALT BLOWING COATING
		30500205	PETROLEUM INDRY ASPHALT CONCRETE DRUM DRYER HOT ASPHALT PLNT
		30501201	MINRL PROD FIBERGLASS WOOL-TYPE FIBER REGENERATIVE FURN
		30504033	MINING OPERATIONS UNSPECIFIED ORE SEE COMMENT ORE DRYER
35910	REFRACTORIES INDUSTRY		
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
35930	GYPSUM PROCESSING		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30501501	MINERAL PRODUCTS GYPSUM MFG ROTARY ORE DRYER
		30501502	MINERAL PRODUCTS GYPSUM MFG ROLLER MILLS
		30501503	MINERAL PRODUCTS GYPSUM MFG CALCINER NOT CLASSIFIED **
		30501504	MINERAL PRODUCTS GYPSUM MFG CONVEYING
		30501508	MINERAL PRODUCTS GYPSUM MFG GYPSUM ORE STOCKPILE
		30501511	MINERAL PRODUCTS GYPSUM MFG CALCINER CONTINUOUS KETTLE
		30501512	MINERAL PRODUCTS GYPSUM MFG CALCINER FLASH
		30501520	MINERAL PRODUCTS GYPSUM MFG BOARD MAKING DRYING KILN
		30501599	MINERAL PRODUCTS GYPSUM MFG NOT CLASSIFIED SEE COMMENT **
		30502501	MINING OPER NONMETALLIC MINRL SAND/GRAVEL TOTAL PLNT-GENL**
35940	NON-METALLIC MINERAL INSULATING MATERIAL	30501702	MINERAL PRODUCTS MINERAL WOOL REVERB FURNACE
		30501703	MINERAL PRODUCTS MINERAL WOOL BLOW CHAMBER
		30501705	MINERAL PRODUCTS MINERAL WOOL COOLER
35990	STONE PROCESSING (BUILDING STONE)	00053631	STONE PROCESSING - BUILDING STONE - CUTTING
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30101801	CHEM MFG PLASTICS PRODN POLYVINYL CHLORID GENERAL
		30119701	CHEM MFG ORGANIC CHEMCLS ETHYLENE PRODCTN GENERAL
		30119705	CHEM MFG ORGANIC CHEMCLS PROPYLENE GENERAL
		30119749	CHEM MFG ORGANIC CHEMCLS ETHYLENE PRODCTN FUGITIVE EMISSION
		30125802	CHEM MFG ORGANIC CHEMCLS BENZENE REACTOR
		30125815	CHEM MFG ORGANIC CHEMCLS MIXED XYLENES GENERAL
		30125880	CHEM MFG ORGANIC CHEMCLS AROMATICS PROD FUGITIVE EMISSION
		30500606	MINERAL PRODUCTS CEMENT MFG DRY PROCESS KILNS
		30500613	MINERAL PRODUCTS CEMENT MFG DRY PROCESS RAW MAT GRIND/DRY
		30500617	MINERAL PRODUCTS CEMENT MFG DRY PROCESS CLINKER GRINDING
		30500619	MINERAL PRODUCTS CEMENT MFG DRY PROCESS CEMENT LOAD OUT
		30500999	MINRL PROD CLAY/FLYASH SINTR NOT CLASSIFIED SEE COMMENT
		30501199	MINRL PROD CONCRETE BATCHING NOT CLASSIFIED SEE COMMENT
		39000602	INDSTRL PROC INPROCESS FUEL NATURAL GAS CEMENT KILN/DRYER
		39000899	INDUSTRIAL PROCES INPROCESS FUEL COKE NOT CLASSIFIED
36100	PETROLEUM REFINING		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
		10200701	EXTCOMB BOILER INDUSTRIAL PROCESS GAS PETROL REFINERY
		10200802	EXTCOMB BOILER INDUSTRIAL COKE ALL BOILER SIZES
		10201001	EXTCOMB BOILER INDUSTRIAL LIQ PETROLEUM GAS BUTANE
		10201302	EXTCOMB BOILER INDUSTRIAL LIQ WASTE-SPECIFY WASTE OIL
		10201401	EXTCOMB BOILER INDUSTRIAL CO BOILER NATURAL GAS
		10201402	EXTCOMB BOILER INDUSTRIAL CO BOILER PROCESS GAS
		20200292	INT COMB IND \NATURAL GAS \RECIPROCATING \B.C.
		30103201	CHEM MFG INORGNC CHEMCLS SULFUR(ELEMENTAL) MOD CLS 2STG 92-5
		30103202	CHEM MFG INORGNC CHEMCLS SULFUR(ELEMENTAL) MOD CLS 3STG 95-6
		30103204	CHEM MFG INORGNC CHEMCLS SULFUR(ELEMENTAL) S RMVL PRCS 99.9%
		30590023	MINERAL PRODUCTS FUEL-FIRED EQPMNT FLARES NAT GAS
		30600103	PETROLEUM INDRY PETROLEUM REFNG PROCESS HEATERS OIL FIRED
		30600104	PETROLEUM INDRY PETROLEUM REFNG PROCESS HEATERS GAS FIRED
		30600105	PETRO IND PETROLEUM REFNG PROCESS HEATERS NATURAL GAS-FIRED
		30600106	PETRO IND PETROLEUM REFNG PROCESS HEATERS PROCESS GAS-FIRED
		30600107	PETROLEUM INDRY PETROLEUM REFNG PROCESS HEATERS LPG FIRED
		30600195	IND PROCESS PETROLEUM IND\PROCESS HEATER\GAS B.C.
		30600199	PETRO IND PETROLEUM REFNG PROCESS HEATERS NOT CLASSIFIED
		30600201	PETRO IND PETROLM REFNG CATALYTIC CRACKNG FLUID CAT.CRACKER
		30600299	FCCU REGENERATOR
		30600301	PETRO IND PETROLM REFNG CATALYTIC CRACKNG THERM CAT.CRACKER

SIC	SIC Name	SCC	SCC Name
36100	PETROLEUM REFINING		
		30600503	PETRO IND FUGITIVE HC EMIS PROCESS DRAINS WASTE WATER SEPTR
		30600602	PETRO IND PETROLEUM REFNG VACUUM DISTILATN COLUMN CONDENSER
		30600603	PETRO IND PETROLEUM REFNG VACUUM DISTILATN COLUMN CONDENSER
		30600702	PETROLEUM INDRY PETROLEUM REFNG COOLING TOWERS
		30600803	PETROLEUM INDRY FUGITIVE HC EMIS PUMP SEALS WITHOUT CONTROLS
		30600805	PETRO IND FUGITIVE HC EMIS MISCELLANEOUS SAMPLING/PURGING
		30600903	PETROLEUM INDRY PETROLEUM REFNG FLARES NAT GAS
		30600904	PETROLEUM INDRY PETROLEUM REFNG FLARES PROCESS GAS
		30600999	PETROLEUM INDRY PETROLEUM REFNG FLARES NOT CLASSIFIED **
		30609914	PETROLEUM INDRY PETROLEUM RFNG INCINERATOR PROCESS GAS
		30610001	PETROLEUM INDRY LUBE OIL MFG GENERAL
		31000201	OIL & GAS PRODN NATURAL GAS PRODN GAS SWEETNG AMINE PROCESS
		31000205	OIL & GAS PRODN NATURAL GAS PRODN FLARES
		31000299	OIL & GAS PRODN NATURAL GAS PRODN NOT CLASSIFIED SEE COMMENT
		40300000	HC EMISSIONS (STORAGE TANKS)
		40301004	PETRO IND E FIXED ROOF TNK GASOLINE-RVP 13 250K BBL-BREATHNG
		40301011	PETRO IND E FIXED ROOF TNK CRUDE OIL-RVP 5 250K BBL-BREATHNG
		40301097	PETRO IND E FIXED ROOF TNKS SPECIFY LIQUID 67% BBL-BREATHING
		40301099	PETRO IND E FIXED ROOF TANKS SPECIFY LIQUID WORKING LOSS
		40301101	PETRO IND E FLOAT ROOF TNK GASOLINE-RVP 13 67% BBL-STAND LOS
		40301104	PETRO IND E FLOAT ROOF TNK GASOLINE-RVP 13 250K BBL-STAND LS
		40301105	PETRO IND E FLOAT ROOF TNK GASOLINE-RVP 10 250K BBL-STAND LS
		40301109	PETRO IND E FLOAT ROOF TNK CRUDE OIL-RVP 5 67% BBL-STAND LOS
		40301110	PETRO IND E FLOAT ROOF TNK CRUDE OIL-RVP 5 250K BBL-STAND LS
		40301112	PETRO IND E FLT ROOF TNK JET NAPHTHA JP-4 250K BBL-STAND LS
		40301114	PETRO IND E FLOAT ROOF TANKS JET KEROSENE 250K BBL-STAND LS
		40301117	PETROLEUM STORAGE FLOAT ROOF TANKS CRUDE OIL WITHDRAWAL LOSS
		40301199	PETRO IND E FLOAT ROOF TNK SPECIFY LIQUID 250K BBL-STAND LS
36120	LUBRICATING OIL AND GREASE INDUSTRY	30600103	PETROLEUM INDRY PETROLEUM REFNG PROCESS HEATERS OIL FIRED
36900	OTHER PETROLEUM & COAL PRODUCTS	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30100504	CHEM MFG CARBON BLACK FURNACE PROC OIL MAIN PROCESS VENT
		30100507	CHEM MFG CARBON BLACK PELLET DRYER
		30100509	CHEM MFG CARBON BLACK FURNACE PROCESS FUGITIVE EMISSION
		30101801	CHEM MFG PLASTICS PRODN POLYVINYL CHLORID GENERAL
		30101807	CHEM MFG PLASTICS PRODN POLYETHYLENE H D GENERAL
		30101812	CHEM MFG PLASTICS PRODN POLYETHYLENE L D GENERAL
		30101893	CHEM MFG PLASTICS PRODN GENERAL PROCESSES RAW MATL STORAGE
		30117401	CHEM MFG ORGANIC CHEMCLS ETHYLENE OXIDE GENERAL
		30510296	MINERAL PRODUCTS BULK MATERIALS STOAGE BINS CHEMICAL,OTHER
		40301104	PETRO IND E FLOAT ROOF TNK GASOLINE-RVP 13 250K BBL-STAND LS
		40301199	PETRO IND E FLOAT ROOF TNK SPECIFY LIQUID 250K BBL-STAND LS
		49000101	PETRO IND MISCELLANEOUS SOLVENT EXTRACTN PETROLEUM SOLVENT
		49000199	ORGNC SOLVNT MISCELLANEOUS SOLVENT EXTRACTN NOT CLASSIFIED
36990	COKE OVENS NOT IN STEEL PLANTS	10200692	EXT COM BOILER IND \NATURAL GAS \10 - 100 GJ/H \B.C.
		20100102	INTERNLCOMBUSTION ELEC GEN. DIST.OIL/DIESEL RECIPROCATING
		30300302	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE OVEN CHARGING
		30300303	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE OVEN PUSHING
		30300304	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE QUENCHING
		30300305	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE COAL UNLOADING
		30300307	PRIM METAL IRON & STEEL BY-PRODUCT COKE COAL CRUSH/HANDLE
		30300310	PRIMARY METALS IRON & STEEL BY-PRODUCT COKE COAL CRUSHING
		30300312	PRIM METAL IRON & STEEL BY-PRODUCT COKE CK CRSH/SCRN/HAND
		30300315	PRIM METAL IRON & STEEL BY-PRODUCT COKE GAS BY-PROD PLANT
		30300316	PRIM METAL IRON & STEEL BY-PRODUCT COKE COAL STORAGE PILE
		30300399	PRIM METAL IRON & STEEL BY-PRODUCT COKE NOT CLASSIFIED **
		30300401	PRIMARY METALS IRON & STEEL BEEHIVE COKE GENERAL
		30501001	MINING OPERATIONS COAL CLEANING THERMAL DRYER FLUIDIZED BED
		30501008	MINING OPERATIONS COAL CLEANING MATERIAL HANDLING UNLOADING
		30501009	MINING OPER COAL CLEANING MATERIAL HANDLING RAW COAL STORAGE
		30501010	MINING OPERATIONS COAL CLEANING MATERIAL HANDLING CRUSHING
		30501011	MINING OPER COAL CLEANING MATERIAL HANDLING COAL TRANSFER
		30501099	MINING OPERATIONS COAL CLEANING NOT CLASSIFIED SEE COMMENT
		40701612	ORGANIC CHEM STRG FIXED ROOF TANKS NAPHTHA WORKING LOSS
36991	OTHER PETRO-COAL INDUSTRY (ASPHALT PROD)	00054100	ASPHALT PRODUCTION - ASPHALT DRYING
		00054200	ASPHALT PRODUCTION - ASPHALT FUGITIVE
		20200192	INT COMB IND\DISTILLATE OIL\RECIPROCATING
		30500201	PETROLEUM INDRY ASPHALT CONCRETE ROTARY DRYER CONVENTNL PLNT
		30500205	PETROLEUM INDRY ASPHALT CONCRETE DRUM DRYER HOT ASPHALT PLNT
		30500206	PETROLEUM INDRY ASPHALT CONCRETE ASPHALT HEATER NATURAL GAS

SIC	SIC Name	SCC	SCC Name
36991	OTHER PETRO-COAL INDUSTRY (ASPHALT PROD)	30500298	PETROLEUM IND\ASPHALT CONCRETE\ASPHALT HEATER\DIST OIL
		30500299	PETRO IND ASPHALT CONCRETE NOT CLASSIFIED SEE COMMENT **
		30502192	IND PROCESS MINING\NON-METALLIC MINERALS\SALT\GRAN/DRYING
		30502508	MINING OPERATIONS NONMETALLIC MINRL SAND/GRAVEL DRYER
37110	SODIUM CARBONATE (NACO3 SODA ASH)	10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		30501613	MINERAL PRODUCTS LIME MFG LIME SILOS
		30501617	MINERAL PRODUCTS LIME MFG CALCINING MULTIPLE HEARTH
37112	ELEMENTAL PHOPHORUS PRODUCTION	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		30111202	CHEM MFG INORGANIC CHEMCLS ELEMNTL PHOSPHROS FURNACE
		30111299	CHEM MFG INORGNC CHEMCLS ELEMNTL PHOSPHROS OTHER NOT CLSSFD
37113	AMMONIUM SULPHATE	30103099	CHEM MFG AGRICULTRL CHEM AMMONM PHOSPHATES NOT CLASSIFIED **
		30113004	CHEM MFG AGRICULTURAL CHEM AMMONIUM SULFATE ROTARY DRYER
		30113005	CHEM MFG AGRICULTURAL CHEM AMMONIUM SULFATE FLUID BED DRYER
		30188801	CHEM MFG FUGITIVE EMISSION NOT CLASSIFIED SEE COMMENT
37114	NITRIC ACID PRODUCTION	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		30101301	CHEM MFG AGRICULTURAL CHEM NITRIC ACID ABSRBR TAILGAS/OD
		30101302	CHEM MFG AGRICULTURAL CHEM NITRIC ACID ABSRBR TAILGAS/NW
		30101304	CHEM MFG AGRICULTURAL CHEM NITRIC ACID NTRC ACD CONCR/NW
		30101399	CHEM MFG AGRICULTURAL CHEM NITRIC ACID OTHER/NOT CLASI**
37115	AMMONIUM PHOSPHATE	30100304	FUGITIVE PHOSPHATES
		30103001	CHEM MFG AGRICULTURAL CHEM AMMONM PHOSPHATES DRYER/COOLER
		30103002	CHEM MFG AGRICULTRL CHEM AMMONM PHOSPHATES AMMONIAT-GRANULTR
		30103003	CHEM MFG AGRICULTRL CHEM AMMONM PHOSPHATES SCREENING/TRANSFR
		30103004	CHEM MFG AGRICULTRL CHEM AMMONM PHOSPHATES BAGGING/HANDLING
37118	PHOSPHATE ACID PROD. THERMAL PROCESSES	30101702	CHEM MFG AGRICULTURAL CHEM PHOS ACID THERMAL ABSORBER
37119	SULPHURIC ACID PRODUCTION	30102201	CHEM MFG INORGANIC CHEMCLS H2SO4-CHAMBER GENERAL
		30102301	CHEM MFG INORGANIC CHEMCLS H2SO4-CONTACT ABSRBR 99.9% CONV
		30102306	CHEM MFG INORGANIC CHEMCLS H2SO4-CONTACT ABSRBR 99.0% CONV
		30102310	CHEM MFG INORGANIC CHEMCLS H2SO4-CONTACT ABSRBR 97.0% CONV
		30102312	CHEM MFG INORGANIC CHEMCLS H2SO4-CONTACT ABSRBR 96.0% CONV
		30102399	CHEM MFG INORGANIC CHEMCLS H2SO4-CONTACT NOT CLASSIFIED **
37120	PETROCHEMICAL IND. - METHANOL PRODUCTION	10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
		30125003	CHEM MFG ORGANIC CHEMCLS METHANOL PRODCTN DISTILLATION VENT
37121	PETROCHEMICAL IND. - ETHYLENE PRODUCTION	10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
		30119701	CHEM MFG ORGANIC CHEMCLS ETHYLENE PRODCTN GENERAL
37123	PETROCHEMICAL IND. -PROPYLENE PRODUCTION	10200799	EXTCOMB BOILER INDUSTRIAL PROCESS GAS OTHER/NOT CLASIFD
		30119705	CHEM MFG ORGANIC CHEMCLS PROPYLENE GENERAL
37124	ACETIC ACID PRODUCTION	30113221	CHEM MFG ORGANIC CHEMCLS ACRYLIC ACID GENERAL
37125	PETROCHEMICAL (POLYVINYL CHLORIDE PROD)	30101801	CHEM MFG PLASTICS PRODN POLYVINYL CHLORID GENERAL
37126	PETROCHEMICAL IND. - ETHYLENE OXIDE PROD	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
		30117401	CHEM MFG ORGANIC CHEMCLS ETHYLENE OXIDE GENERAL
		30688801	PETROLEUM INDRY FUGITIVE EMISSION NOT CLASSIFIED SEE COMMENT
37130	PETROCHEMICAL IND. - AMMONIA PRODUCTION	30100305	CHEM MFG AGRICULTURAL CHEM AMMONIA FEED DESULFURIZTN
		30100306	CHEM MFG AGRICULTURAL CHEM AMMONIA PRI.REFORMER-GAS
		30100308	CHEM MFG AGRICULTURAL CHEM AMMONIA CO2 REGENERATOR
		30100309	CHEM MFG AGRICULTURAL CHEM AMMONIA CONDENSATE STRIPR
		30100399	CHEM MFG AGRICULTURAL CHEM AMMONIA OTHER/NOT CLASI**
		31000306	PRIMARY REFORMER
37131	PETROCHEMICAL INDUSTRY ISOBUTYLENE PROD.	30199998	CHEM MFG MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
37134	PETROCHEMICAL VINYL CHLORIDE PRODUCTION	30112540	CHEM MFG ORGANIC CHEMCLS VINYL CHLORIDE GENERAL
37135	ACETIC ACID PRODUCTION	30112502	CHEM MFG ORGANIC CHEMCLS ETHYLENE DICHLORD DIRECT CHLORINATN
		30113201	CHEM MFG ORGANIC CHEMCLS ORGANIC ACIDS PRD ACETIC ACID-MTHNL
37136	KETENE ACID PRODUCTION	10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
37137	PENTAERYTHRITOL PRODUCTION	30120601	CHEM MFG ORGANIC CHEMCLS STYRENE GENERAL
37138	METHANOL PRODUCTION	10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR

SIC	SIC Name	SCC	SCC Name
37140	VINYL ACETATE PRODUCTION		
37141	RED PHOSPHOROUS PRODUCTION	10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		30111299	CHEM MFG INORGNC CHEMCLS ELEMNTL PHOSPHROS OTHER NOT CLSSFD
37142	SODIUM CHLORATE PRODUCTION	30111299	CHEM MFG INORGNC CHEMCLS ELEMNTL PHOSPHROS OTHER NOT CLSSFD
37143	AMMONIUM NITRATE PRODUCTION	30102704	CHEM MFG AGRICULTURAL CHEM FERTILIZ AMONNITR NEUTRALIZER
37144	SODIUM NITRATE PRODUCTION	30102799	USINE AZOTURE SODIUM
37145	TNT PRODUCTION	30101099	CHEM MFG EXPLOSIVES TRINITROTOLUENE OTHER/NOT CLASI**
37200	MIXED FERTILIZERS	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30101301	CHEM MFG AGRICULTURAL CHEM NITRIC ACID ABSRBR TAILGAS/OD
		30101702	CHEM MFG AGRICULTURAL CHEM PHOS ACID THERMAL ABSORBER
		30102704	CHEM MFG AGRICULTURAL CHEM FERTILIZ AMONNITR NEUTRALIZER
		30102712	CHEM MFG AGRICULTRL CHEM FERTILIZ AMONNITR PRILING TOWER HD
		30102714	CHEM MFG AGRICULTURAL CHEM FERTILIZ AMONNITR HD PRILL COOLER
		30103023	CHEM MFG AGRICULTRL CHEM AMMONM PHOSPHATES AMMONIATR/GRANLAT
		30104001	CHEM MFG AGRICULTURAL CHEM UREA NOT CLASSIFIED
		30104002	CHEM MFG AGRICULTURAL CHEM UREA SOLUTION CONCENTN
		30104003	CHEM MFG AGRICULTRL CHEM UREA-SOLID PRODCT PRILLING(UNCLSFD)
37210	FERTILIZER PRODUCTION AMMONIUM NITRATE	30102702	PRILLING TOWER
		30102703	DRYING AND COOLING - PRILL
		30102704	CHEM MFG AGRICULTURAL CHEM FERTILIZ AMONNITR NEUTRALIZER
		30102707	CHEM MFG AGRICULTRL CHEM FERTILIZ AMONNITR ROT DRUM GRANLATR
		30102708	CHEM MFG AGRICULTURAL CHEM FERTILIZ AMONNITR PAN GRANULATOR
		30102709	CHEM MFG AGRICULTRL CHEM FERTILIZ AMONNITR BULK LOADING GEN
		30102712	CHEM MFG AGRICULTRL CHEM FERTILIZ AMONNITR PRILING TOWER HD
		30102714	CHEM MFG AGRICULTURAL CHEM FERTILIZ AMONNITR HD PRILL COOLER
		30102717	CHEM MFG AGRICULTRL CHEM FERTILIZ AMONNITR EVAP CONCENTR HD
		30102721	CHEM MFG AGRICULTURAL CHEM FERTILIZ AMONNITR NEUTRALIZER LD
		30102722	CHEM MFG AGRICULTURAL CHEM FERTILIZ AMONNITR PRILNG TOWER LD
		30102725	CHEM MFG AGRICULTURAL CHEM FERTILIZ AMONNITR LD PRILL DRYER
37219	CHEMICAL FERTILIZER & FERTILIZER MTL'S	30101699	CHEM MFG AGRICULTRL CHEM PHOS ACD/WET PROC NOT CLASSIFIED **
		30102301	CHEM MFG INORGANIC CHEMCLS H2SO4-CONTACT ABSRBR 99.9% CONV
		30102399	CHEM MFG INORGANIC CHEMCLS H2SO4-CONTACT NOT CLASSIFIED **
		30103001	CHEM MFG AGRICULTURAL CHEM AMMONM PHOSPHATES DRYER/COOLER
		30103002	CHEM MFG AGRICULTRL CHEM AMMONM PHOSPHATES AMMONIAT-GRANULTR
		30103003	CHEM MFG AGRICULTRL CHEM AMMONM PHOSPHATES SCREENING/TRANSFR
		30103099	CHEM MFG AGRICULTRL CHEM AMMONM PHOSPHATES NOT CLASSIFIED **
		30187007	INORGNC CHEM STRG FXD ROOF TNKS PHOSPHORIC ACD BREATHNG LOSS
		30501901	MINING OPERATIONS NONMETALLIC MINRL PHOSPHATE ROCK DRYING
		30501902	MINING OPERATIONS NONMETALLIC MINRL PHOSPHATE ROCK GRINDING
		30501903	METAL ORE MNG TALLIC MINRL PHOSPHATE ROCK TRANSFER/STORAGE
		30501991	IND PROCESS MIN PROD\PHOSPHATE ROCK\FUGITIVE DUST
37220	NITRATE FERTILIZER - UREA	30102703	DRYING AND COOLING - PRILL
		30102707	CHEM MFG AGRICULTRL CHEM FERTILIZ AMONNITR ROT DRUM GRANLATR
		30102709	CHEM MFG AGRICULTRL CHEM FERTILIZ AMONNITR BULK LOADING GEN
		30104002	CHEM MFG AGRICULTURAL CHEM UREA SOLUTION CONCENTN
		30104003	CHEM MFG AGRICULTRL CHEM UREA-SOLID PRODCT PRILLING(UNCLSFD)
		30104004	CHEM MFG AGRICULTRL CHEM UREA-SOLID PRODCT DRUM GRANULATION
		30104007	CHEM MFG AGRICULTURAL CHEM UREA-SOLID PRODCT BULK LOADING
		30104012	CHEM MFG AGRICULTRL CHEM UREA-SOLID PRODCT ROTARY DRUM COOLR
37310	PETRO CHEM.POLYETHYLENE LOW-DENSITY PROD	10300693	EXT COM BOILER COMM-INST \NATURAL GAS \-10 GJ/H \B.C.
		30101838	CHEM MFG PLASTICS PRODN POLYESTER/ALKYD REACTOR KETTLE
		30101839	CHEM MFG PLASTICS PRODN POLYESTER/ALKYD RESIN THINNG TANK
		30101899	CHEM MFG PLASTICS PRODN NOT CLASSIFIED SEE COMMENTS
		40705698	ORGANIC CHEM STRG FXD ROOF TNK SPECIFY GLYCOL WORKING LOSS
		40782099	ORGNC CHEM STRG PRESSURE TNKS SPECIFY ALKENE WITHDRAWAL LOSS
37312	PLASTIC & SYNTHETIC RESINS FABRICATION	00056000	PLASTICS FABRICATION
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30101301	CHEM MFG AGRICULTURAL CHEM NITRIC ACID ABSRBR TAILGAS/OD
		30101801	CHEM MFG PLASTICS PRODN POLYVINYL CHLORID GENERAL
		30101805	CHEM MFG PLASTICS PRODN PHENOLIC RESINS GENERAL

SIC	SIC Name	SCC	SCC Name
37312	PLASTIC & SYNTHETIC RESINS FABRICATION	30101817	CHEM MFG PLASTICS PRODN POLYSTYRENE GENERAL
		30101822	CHEM MFG PLASTICS PRODN ACRYLIC RESINS GENERAL
		30101837	CHEM MFG PLASTICS PRODN POLYESTER RESINS GENERAL
		30101838	CHEM MFG PLASTICS PRODN POLYESTER/ALKYD REACTOR KETTLE
		30101891	CHEM MFG PLASTICS PRODN GENERAL PROCESSES REACTOR VENTS
		30101893	CHEM MFG PLASTICS PRODN GENERAL PROCESSES RAW MATL STORAGE
		30101899	CHEM MFG PLASTICS PRODN NOT CLASSIFIED SEE COMMENTS
		30102001	CHEM MFG PRINTING INK MFG VEHICLE COOKING GENERAL
		30102005	CHEM MFG PRINTING INK MFG PIGMENT MIXING GENERAL
		30102601	CHEM MFG PLASTICS PRODN SYNTHETIC RUBBER STY-BUTDIENE(SBR)
		30102602	CHEM MFG PLASTICS PRODN SYNTHETIC RUBBER ISOBUTYLNE(BUTYL)
		30102612	CHEM MFG PLASTICS PRODN SYNTHETIC RUBBER SBR-PRESTORG TANK
		30102699	CHEM MFG PLASTICS PRODN SYNTHETIC RUBBER NOT CLASSIFIED
		30103204	CHEM MFG INORGNC CHEMCLS SULFUR(ELEMENTAL) S RMVL PRCS 99.9%
		30103499	CHEM MFG ORGANIC CHEMCLS AMINES/AMIDES SEE COMMENT
		30104005	CHEM MFG AGRICULTURAL CHEM UREA-SOLID PRODCT COATING
		30112001	CHEM MFG ORGANIC CHEMCLS FORMALDEHYDE SILVER CATALYST
		30112012	CHEM MFG ORGANIC CHEMCLS ACETALDEHYDE VIA ETHANOL
37400	PHARMACEUTICALS, MEDECINES	10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
37500	PAINT AND VARNISH		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200404	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 5 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30101401	CHEM MFG PAINT MFG MIXING/BLENDING TANKS
		30101499	CHEM MFG PAINT MFG OTHER/NOT CLASIFD SEE COMMENT
		30101501	CHEM MFG VARNISH MFG BODYING OIL GENERAL
		30101503	CHEM MFG VARNISH MFG ALKYD GENERAL
		30101505	CHEM MFG VARNISH MFG ACRYLIC GENERAL
		30101599	CHEM MFG VARNISH MFG OTHER/NOT CLASIFD SEE COMMENT
		30102001	CHEM MFG PRINTING INK MFG VEHICLE COOKING GENERAL
		30102003	CHEM MFG PRINTING INK MFG VEHICLE COOKING OLEORESIN
		30183001	CHEM MFG ORGANIC CHEMCLS GENERAL PROCESSES STORAGE/TRANSFER
37510	PAINT & VARNISH MANUFACTURING	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		30102321	CHEM MFG INORGANIC CHEMCLS H2S04-CONTACT STORAGE TANK VENT
		30103501	CHEM MFG INORGANIC CHEMCLS TI02 PIGMENT CALCINER
		30103502	CHEM MFG INORGANIC CHEMCLS TI02 PIGMENT DIGESTOR
		30103550	CHEM MFG INORGANIC CHEMCLS INORGANIC PIGMENT ORE GRINDING
		30103551	CHEM MFG INORGANIC CHEMCLS INORGANIC PIGMENT ORE DRYER
		30103599	CHEM MFG INORGANIC CHEMCLS INORGANIC PIGMENT NOT CLASSIFIED
		30300523	PRIMARY METALS COPPER SMELTING CONVERTER AFTER REVERB FURN
37600	SOAP & CLEANING COMPOUNDS		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30100901	CHEM MFG SOAP/DETERGENTS SOAP/DETERGENTS SPRAY DRYING
		30100999	CHEM MFG SOAP/DETERGENTS OTHER/NOT CLASIFD
		30101799	CHEM MFG AGRICULTRL CHEM PHOS ACID THERMAL NOT CLASSIFIED **
		30201799	FOOD/AGRICLTR PEANUT PROCESSING NOT CLASSIFIED SEE COMMENT
		30510296	MINERAL PRODUCTS BULK MATERIALS STOAGE BINS CHEMICAL,OTHER
37800	INDUSTRIAL CHEMICALS		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10300501	EXTCOMB BOILER COM-INSTUTNL DISTILLATE OIL NO 1 AND NO 2 OIL
		10300601	EXTCOMB BOILER COMMERCL-INSTUTNL NATURAL GAS >100MMBTU/HR
		30101812	CHEM MFG PLASTICS PRODN POLYETHYLENE L D GENERAL
		30101822	CHEM MFG PLASTICS PRODN ACRYLIC RESINS GENERAL
		30101837	CHEM MFG PLASTICS PRODN POLYESTER RESINS GENERAL
		30101860	CHEM MFG PLASTICS PRODN POLYETHYLENE RECOVERY SYSTEM
		30101861	CHEM MFG PLASTICS PRODN POLYETHYLENE PURIFICATION SYS
		30101894	CHEM MFG PLASTICS PRODN GENERAL PROCESSES SOLVENT STORAGE
		30101899	CHEM MFG PLASTICS PRODN NOT CLASSIFIED SEE COMMENTS
		30101905	CHEM MFG ORGANIC CHEMCLS PHTHALIC ANHYDRID NAPTLN OXDN-RXR
		30101907	CHEM MFG ORGANIC CHEMCLS PHTHALIC ANHYDRID NAPTLN OXDN-DISTN
		30102101	CHEM MFG INORGNC CHEMCLS SODIUM CARBONATE SOLVAY-NH3 RECVRY
		30104202	CHEM MFG ORGANIC CHEMCLS LEAD ALKYL-NA/PB PROCESS VENTS-TEL
		30110002	CHEM MFG ORGANIC CHEMCLS MALEIC ANHYDRIDE PROD RECVY ABSRBR
		30112501	CHEM MFG ORGANIC CHEMCLS ETHYLENE DICHLORD OXYCHLORINATION
		30112515	CHEM MFG ORGANIC CHEMCLS ORGANOHALOGENS ETHYL CHLORIDE
		30500499	MINERAL PRODUCTS CALCIUM OTHER NOT CLAS
		30502101	MINING OPERATIONS NONMETALLIC MINRL SALT MINING GENERAL
37900	OTHER CHEMICAL INDUSTRIES		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL

SIC	SIC Name	SCC	SCC Name
37900	OTHER CHEMICAL INDUSTRIES		
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200504	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 4 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		30100508	CHEM MFG CARBON BLACK BAGGING/LOADING
		30100509	CHEM MFG CARBON BLACK FURNACE PROCESS FUGITIVE EMISSION
		30101301	CHEM MFG AGRICULTURAL CHEM NITRIC ACID ABSRBR TAILGAS/OD
		30103552	CHEM MFG INORGANIC CHEMCLS INORGANIC PIGMENT PIGMENT MILLING
		30103553	CHEM MFG INORGANIC CHEMCLS INORGANIC PIGMENT PIGMENT DRYER
		30103599	CHEM MFG INORGANIC CHEMCLS INORGANIC PIGMENT NOT CLASSIFIED
		30300307	PRIM METAL IRON & STEEL BY-PRODUCT COKE COAL CRUSH/HANDLE
		30300312	PRIM METAL IRON & STEEL BY-PRODUCT COKE CK CRSH/SCRN/HAND
		30300399	PRIM METAL IRON & STEEL BY-PRODUCT COKE NOT CLASSIFIED **
		30300701	PRIM METAL FERROALLOY SEMICOVERED FURNC FERROMANGANES EAF
		30300704	PRIM METAL FERROALLOY SEMICOVERED FURNC FEROCHRMSILCN EAF
		30402002	ELEC EQPMNT FURNACE ELECTRODE MIXING
		30402003	ELEC EQPMNT FURNACE ELECTRODE PITCH TREATING
		30402099	ELEC EQPMNT FURNACE ELECTRODE NOT CLASSIFIED SEE COMMENT
		40201301	ORGNC SOLVNT SURFACE COATING PAPER COATING COATING OPERATION
		40202299	ORGANIC SOLVENT SURFACE COATING PLASTIC PARTS SEE COMMENT
37990	OTHER CHEMICAL PRODUCTS INDUSTRIES NEC		
		30800720	RUBBER/PLASTICS FAB PLSTC PROD FIBERGLASS RESIN PROD-GENRAL
		30800799	RUBBER/PLASTICS FAB.PLASTIC PROD NOT CLASSIFIED SEE COMMENT
		30890003	RUBBER/PLASTICS FUEL FIRED EQPMNT PROCESS HEATERS NAT GAS
39900	MISC. MANUFAC. INDUSTRIES		
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200901	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE BARK>50K LB STEAM
		10200903	EXTCOMB BOILER INDUSTRIAL WOOD/BARK WASTE WOOD>50K LB STEAM
		40201722	ORGANIC SOLVENT SURFACE COATING CAN COATING INTERIOR SPRAY
39990	OTHER MANUFACTURED PRODUCTS INDUSTRIES		
		30800720	RUBBER/PLASTICS FAB PLSTC PROD FIBERGLASS RESIN PROD-GENRAL
		31499999	TRANSPORTN EQPMNT MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
40110	RESIDENTIAL CONSTRUCTION		
		00045100	CONSTRUCTION SITES - RESIDENTIAL CONSTRUCTION
40210	NON RESIDENTIAL CONSTRUCTION		
		00045200	CONSTRUCTION SITES - NON-RESIDENTIAL CONSTRUCTION
41190	HEAVY CONSTRUCTION		
		00045500	CONSTRUCTION SITES - HEAVY CONSTRUCTION
41210	BRIDGE, ROAD CONSTRUCTION		
		00045400	CONSTRUCTION SITES - BRIDGES, TUNNELS, ROADS
		40202501	ORGNC SOLVNT SURFACE COATNG MISC.METAL PARTS COATNG OPERATN
41220	WATER, SEWER, CONSTRUCTION		
		00045300	CONSTRUCTION SITES - WATER, SEWER, UTILITY
42751	PAINTING & DECORATING		
		00077000	APPLICATION OF SURFACE COATING - TRADE, SALES USE
		00078200	APPLICATION OF SURFACE COATING - INDUSTRIAL USE
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		31499999	TRANSPORTN EQPMNT MISCELLANEOUS NOT CLASSIFIED SEE COMMENT
		40200101	ORGNC SOLVNT SURFACE COATING PAINT-GENERAL SOLVENT-BASE CTNG
44910	LAND DEVELOPERS (LANDFILL SITES)		
		00044000	LANDFILL SITES
45110	AIRCRAFT (OFF-HIGHWAY MOBILE SOURCES)		
		00023110	OFF-HIGHWAY MOBILE SOURCE - JET AIRCRAFT
		00023120	OFF-HIGHWAY MOBILE SOURCE - TURBOPROP AIRCRAFT
		00023130	OFF-HIGHWAY MOBILE SOURCE - PISTON ENGINE AIRCRAFT
		00023140	OFF-HIGHWAY MOBILE SOURCE - HELICOPTERS
		00023150	OFF-HIGHWAY MOBILE SOURCE - SMALL PISTON AIRCRAFT
		00023210	OFF-HIGHWAY MOBILE SOURCE - JET AIRCRAFT FLIGHT EMISSIONS
		00023230	OFF-HIGHWAY MOBILE SOURCE - PISTON ENGINE FLIGHT EMISSIONS
		00023240	OFF-HIGHWAY MOBILE SOURCE - HELICOPTER FLIGHT EMISSIONS
		00023250	OFF-HIGHWAY MOBILE SOURCE - LOCAL AIRCRAFT FLIGHT EMISSIONS
45310	RAILROADS (OFF-HIGHWAY MOBILE SOURCES)		
		00024100	OFF-HIGHWAY MOBILE SOURCE - DIESEL OIL - RAILROADS
45400	MARINE (OFF-HIGHWAY MOBILE SOURCE)	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		00025110	OFF-HIGHWAY MOBILE SOURCE - MOTORSHIPS DOCKSIDE
		00025120	OFF-HIGHWAY MOBILE SOURCE - STEAMPSHIP DOCKSIDE
		00025210	OFF-HIGHWAY MOBILE SOURCE - MOTORSHIPS UNDERWAY
		00025220	OFF-HIGHWAY MOBILE SOURCE - STEAMSHIPS UNDERWAY
		00025310	OFF-HIGHWAY MOBILE SOURCE - GASOLINE OUTBOARDS
45600	LIGHT-DUTY GASOLINE TRUCKS		
		00021100	GASOLINE POWERED MOTOR VEHICLES - LIGHT DUTY TRUCKS
45601	HEAVY-DUTY GASOLINE TRUCKS		
		00021200	GASOLINE POWERED MOTOR VEHICLES - HEAVY DUTY TRUCKS
45602	OTHER DIESEL VEHICLES		
		00022210	DIESEL POWERED ENGINES - AGRICULTURE DIESEL VEHICLES

SIC	SIC Name	SCC	SCC Name
45602	OTHER DIESEL VEHICLES		
		00022220	DIESEL POWERED ENGINES - CONSTRUCTION VEHICLES
		00022230	DIESEL POWERED ENGINES - MINING DIESEL VEHICLES
		00022240	DIESEL POWERED ENGINES - MANUFACTURING DIESEL VEHICLES
		00022250	DIESEL POWERED ENGINES - FORESTRY DIESEL VEHICLES
		00022260	DIESEL POWERED ENGINES - PUBLIC ADMINISTRATION DIESEL
		00022270	DIESEL POWERED ENGINES - PIPELINES DIESEL VEHICLES
45603	LIGHT-DUTY DIESEL TRUCKS		
		00021300	DIESEL POWERED ENGINES - LIGHT DUTY VEHICLES
45604	HEAVY-DUTY DIESEL VEHICLES	00021400	DIESEL POWERED ENGINES - HEAVY DUTY VEHICLES
45610	TRUCK TRANSPORTATION ON GRAVEL ROAD		
		00042120	DUST FROM UNPAVED ROADS - TRUCKS TREATED GRAVEL ROADS
		00042220	DUST FROM UNPAVED ROADS - TRUCKS UNTREATED GRAVEL ROADS
		00042320	DUST FROM UNPAVED ROADS - TRUCKS EARTH ROADS
45890	GASOLINE POWERED AUTOMOBILES	00021000	GASOLINE POWERED MOTOR VEHICLES - AUTOMOBILES
45891	GASOLINE POWERED MOTOR CYCLES	00021150	GASOLINE POWERED MOTOR VEHICLES - MOTORCYCLES
45892	SNOWMOBILES (OFF-ROAD USE OF GASOLINE)	00022140	GASOLINE POWERED MOTOR VEHICLES - SNOWMOBILES
45893	OTHER TRANSPORTATION(DUST UNPAVED ROADS)		
		00042110	DUST FROM UNPAVED ROADS - VEHICLES TREATED GRAVEL ROADS
		00042210	DUST FROM UNPAVED ROADS - VEHICLES UNTREATED GRAVEL ROAD
		00042310	DUST FROM UNPAVED ROADS - VEHICLES EARTH ROADS
45894	OTHER TRANSPORTATION-OFF ROAD USE OF GAS	00022100	NON-HIGHWAY USE OF GASOLINE
45911	HIGHWAY...BRIDGE IND. (DUST PAVED ROADS)		
		00041110	DUST FROM PAVED ROADS - VEHICLES PAVED ROADS
		00041120	DUST FROM PAVED ROADS - TRUCKS PAVED ROADS
47110	GRAIN HANDLING+MILLING TERMINAL ELEVATOR		
		00061110	GRAIN HANDLING AND MILLING - TERMINAL ELEVATOR - SHIPPING
		00061120	GRAIN HANDLING AND MILLING - TERMINAL ELEVATOR - TRANSFER
		00061130	GRAIN HANDLING AND MILLING - TERMINAL ELEVATOR - CLEANING
		00061140	GRAIN HANDLING AND MILLING - TERMINAL ELEVATOR - DRYING
		00061150	GRAIN HANDLING AND MILLING - TERMINAL ELEVATOR - HEAD HOUSE
		00061160	GRAIN HANDLING AND MILLING - TERMINAL ELEVATOR - TRIPPER
		10200693	EXT COM BOILER IND \NATURAL GAS \-10 GJ/H \B.C.
		30103103	CHEM MFG ORGANIC CHEMCLS TEREPHTHALIC ACID CRYSTL/DRYNG VENT
		30200805	FOOD/AGRICLTR FEED MANUFACTURE OTHER GRAIN FEED GRINDING
		30200806	FOOD/AGRICLTR FEED MANUFACT OTHER GRAIN FEED PELLET COOLERS
		30200899	FOOD/AGRICLTR FEED MANUF OTHER GRAIN FEED NOT CLASSIFIED **
		30203103	FOOD/AGRICLTR GRAIN ELEVATORS EXPORT GRAIN ELEV CLEANING
		30203105	FOOD/AGRICLTR GRAIN ELEVATORS EXPORT GRAIN ELEV UNLOADING
		30203106	FOOD/AGRICLTR GRAIN ELEVATORS EXPORT GRAIN ELEV LOADING
		30203107	FOOD/AGRICLTR GRAIN ELEVTRS EXPRT GRN ELEV REMV BINS TUNL BT
		30203109	FOOD/AGRICLTR GRAIN ELEVTRS EXPRT GRN ELEV TRIPPER GALLRY BT
		30203199	IND PROCESS FOOD/AGR EXPORT GRAIN ELEV. NOT CLASSIFIED
47111	GRAIN HANDLING+MILLING PRIMARY ELEVATOR		
		00061410	GRAIN HANDLING AND MILLING - PRIMINAL ELEVATOR - SHIPPING
		00061420	GRAIN HANDLING AND MILLING - PRIMINAL ELEVATOR - TRANSFER
		00061430	GRAIN HANDLING AND MILLING - PRIMINAL ELEVATOR - HEAD HOUSE
47112	GRAIN HANDLING+MILLING TRANSFER ELEVATOR		
		00061210	GRAIN HANDLING AND MILLING - TRANSFER ELEVATOR - SHIPPING
		00061220	GRAIN HANDLING AND MILLING - TRANSFER ELEVATOR - TRANSFER
		00061230	GRAIN HANDLING AND MILLING - TRANSFER ELEVATOR - HEAD HOUSE
		00061240	GRAIN HANDLING AND MILLING - TRANSFER ELEVATOR - TRIPPER
47113	GRAIN HANDLING+MILLING PROCESS ELEVATOR		
		00061310	GRAIN HANDLING AND MILLING - PROCESS ELEVATOR - RECEIVING
		00061320	GRAIN HANDLING AND MILLING - PROCESS ELEVATOR - PRECLEANING
		00061330	GRAIN HANDLING AND MILLING - PROCESS ELEVATOR - CLEANING
		00061340	GRAIN HANDLING AND MILLING - PROCESS ELEVATOR - MILLHOUSE
49110	ELECTRIC POWER GENERATION		
		00014100	FUEL COMB - STATIONARY SOURCE ELECTRIC POWER - NATURAL G
		00014200	FUEL COMB - STATIONARY SOURCE ELECTRIC POWER - HEAVY OIL
		00014300	FUEL COMB - STATIONARY SOURCE ELECTRIC POWER - LIGHT OIL
		00014400	FUEL COMB - STATIONARY SOURCE ELECTRIC POWER - MISC. DIE
		10100201	EXTCOMB BOILER ELEC GEN. BITUMINOUS COAL PULV COAL WET BOT
		10100204	EXTCOMB BOILER ELEC GENERATN BITUMINOUS COAL SPREADER STOKER
		10100224	EXTCOMB BOILER ELEC GEN. SUBBITUMINUS COAL SPREADER STOKER
		10100226	EXTCOMB BOILER ELEC GEN. SUBBITUMINUS COAL PULV DRY TANGENTL
		10100301	EXTCOMB BOILER ELECTRIC GENERATN LIGNITE PULVERIZED COAL
		10100302	EXTCOMB BOILER ELECTRIC GENERATN LIGNITE PULVERZD TANGENTL
		10100306	EXTCOMB BOILER ELECTRIC GENERATN LIGNITE SPREADER STOKERS
		10100401	EXTCOMB BOILER ELEC GENERATN RESIDUAL OIL NO 6 OIL NORM FRG
		10100405	EXTCOMB BOILER ELEC GENERATN RESIDUAL OIL NO 5 OIL NORM FRG

SIC	SIC Name	SCC	SCC Name
49110	ELECTRIC POWER GENERATION		
		10100501	EXTCOMB BOILER ELEC GEN. DISTILLATE OIL NO 1 AND NO 2 OIL
		10100601	EXTCOMB BOILER ELEC GENERATN NATURAL GAS >100MMBTU/HR EXTF
		10100602	EXTCOMB BOILER ELEC GENERATN NATURAL GAS <100MMBTU/HR EXTF
		10100604	EXTCOMB BOILER ELEC GENERATN NATURAL GAS TAN FIRED BOILERS
		20100101	INTERNLCOMBUSTION ELECTRIC GENERATN DIST.OIL/DIESEL TURBINE
		20100102	INTERNLCOMBUSTION ELEC GEN. DIST.OIL/DIESEL RECIPROCATING
		20100201	INTERNLCOMBUSTION ELECTRIC GENERATN NATURAL GAS TURBINE
		20100291	INT COM ELEC GEN \NATURAL GAS \TURBINE \B.C.
		20200102	INTERNLCOMBUSTION INDUSTRIAL DIST.OIL/DIESEL RECIPROCATING
		30501008	MINING OPERATIONS COAL CLEANING MATERIAL HANDLING UNLOADING
		30501009	MINING OPER COAL CLEANING MATERIAL HANDLING RAW COAL STORAGE
49990	MUNICIPAL INCINERATION		
		50100101	SOLID WASTE DISPL GOVERNMNT MUNICIPAL INCIN MULTIPLE CHAMBER
		50100102	SOLID WASTE DISPL GOVERNMENT MUNICIPAL INCIN SINGLE CHAMBER
		50100103	SOLID WASTE DISPL GOVERNMENT MUNICIPAL OPEN PIT INCINERATOR
		50100191	SOLID WASTE GOV'T\MUNICIPAL INCIN\CONSUMAT 760
		50100504	SOLID WASTE DISPL GOVERNMENT OTHER - FLUIDIZED BED
		50100505	SOLID WASTE DISPL GOVERNMENT OTHER INCINERATOR PATHOLOGICAL
		50100506	SOLID WASTE DISPL GOVERNMENT OTHER INCINERATOR SLUDGE
		50100507	SOLID WASTE DISPL GOVERNMNT OTHR INCINERTR CONICAL-MUNICIPAL
		50100599	SOLID WASTE GOV'T\INCINERATION\NOT CLASSIFIED
49992	INDUSTRIAL INCINERATION (SOLID WASTE)		
		00031300	SOLID WASTE INCINERATION - MULTIPLE CHAMBER
		00031500	SOLID WASTE INCINERATION - CONTROLLED AIR
		50300101	SOLID WASTE DISPL INDUSTRIAL INCINERATION MULTIPLE CHAMBER
		50300102	SOLID WASTE DISPL INDUSTRIAL INCINERATION SINGLE CHAMBER
		50300106	SOLID WASTE DISPL INDUSTRIAL INCINERATION TRENCH BURNR WOOD
		50300109	SOLID WASTE DISPL INDUSTRIAL INCINERATION TRNCH BRNR REFUSE
		50300195	SOLID WASTE INDUSTRIAL\INCINERATOR\CONICAL WOOD
		50300196	SOLID WASTE INDUSTRIAL\INCINERATOR\CONICAL WOOD
		50300201	SOLID WASTE DISPL INDUSTRIAL OPEN BURNING WOOD/VEG/LEAVES
		50300202	SOLID WASTE DISPL INDUSTRIAL OPEN BURNING REFUSE
		50300506	SOLID WASTE DISPL INDUSTRIAL INCINERATOR SLUDGE
49993	COMMERCIAL INCINERATION (SOLID WASTE)		
		50200101	SOLID WASTE DISPL COMRCL/INST INCINERTN-GENL MULTIPLE CHAMBR
		50200102	SOLID WASTE DISPL COMRCL/INSTNL INCINERTN-GENL SINGLE CHAMBR
		50200103	SOLID WASTE DISPL COMRCL/INSTNL INCINERTN-GENL CONTROLLD AIR
		50200505	SOLID WASTE DISPL COMRCL/INSTNL INCINERTN-SPCL PATHOLOGICAL
		50200506	SOLID WASTE DISPL COMMERCL/INSTITNL INCINERATION-SPCL SLUDGE
		50200591	SOLID WASTE COMM-INST\HOSPITAL INCIN\CONSUMAT 760
50000	PETROCHEM-Acrylonitrile Butadiene Styren		
		30101849	CHEM MFG PLASTICS PRODN ABS RESIN GENERAL
		40703613	ORGANIC CHEM STRG FIXED ROOF TANKS STYRENE BREATHING LOSS
		40703614	ORGANIC CHEM STRG FIXED ROOF TANKS STYRENE WORKING LOSS
		40707601	ORGANIC CHEM STRG FXD ROOF TNK ACRYLONITRILE BREATHING LOSS
		40707602	ORGANIC CHEM STRG FXD ROOF TNK ACRYLONITRILE WORKING LOSS
		40782001	ORGNC CHEM STRG PRESSURE TANKS 1,3-BUTADIENE WITHDRAWAL LOSS
50001	PETROCHEM - Acetic Acid		
		30113201	CHEM MFG ORGANIC CHEMCLS ORGANIC ACIDS PRD ACETIC ACID-MTHNL
		40704001	ORGANIC CHEM STRG FXD ROOF TNK ACETIC ACID BREATHING LOSS
		40704002	ORGANIC CHEM STRG FIXED ROOF TANKS ACETIC ACID WORKING LOSS
50002	PETROCHEM - Acetone		
		30109101	CHEM MFG ORGANIC CHEMCLS KETONE PRODUCTION ACETONE-GENERAL
		30109151	CHEM MFG ORGANIC CHEMCLS ACETONE PRODUCTON CUMENE OXIDATION
		30109152	CHEM MFG ORGANIC CHEMCLS ACETONE PRODUCTON CHP CONCENTRATOR
		30109153	CHEM MFG ORGANIC CHEMCLS ACETONE PRODUCTON LIGHT-ENDS DSTL V
		30109154	CHEM MFG ORGANIC CHEMCLS ACETONE PRODUCTON ACETONE FINISH CL
		30109180	CHEM MFG ORGANIC CHEMCLS ACETONE PRODUCTON FUGITIVE EMISSION
		40722801	ORGANIC CHEM STRG FLOAT ROOF TANKS ACETONE STAND STRG LOSS
		40722802	ORGANIC CHEM STRG FLOAT ROOF TANKS ACETONE WITHDRAWAL LOSS
50004	PETROCHEM - Adipic Acid		
		30100101	CHEM MFG ORGANIC CHEMCLS ADIPIC ACID PROD ALL ADIPC ACD FAC
		30100102	CHEM MFG ORGANIC CHEMCLS ADIPIC ACID PROD RAW MAT STORAGE
		30100103	CHEM MFG ORGANIC CHEMCLS ADIPIC ACID PROD CYCLOHEXANE OXDTN
		30100104	CHEM MFG ORGANIC CHEMCLS ADIPIC ACID PROD NITRIC ACID RXTN
		30100105	CHEM MFG ORGANIC CHEMCLS ADIPIC ACID PROD ADIPIC ACID REFNG
		30100106	CHEM MFG ORGANIC CHEMCLS ADIPIC ACID PROD DRY/LOAD STORAGE
		30100107	CHEM MFG ORGANIC CHEMCLS ADIPIC ACID PROD ABSORBER
		30100108	CHEM MFG ORGANIC CHEMCLS ADIPIC ACID PROD ADIPIC ACID DRYNG
		30100109	CHEM MFG ORGANIC CHEMCLS ADIPIC ACID PROD ADIPIC ACID COOLR
		30100180	CHEM MFG ORGANIC CHEMCLS ADIPIC ACID PROD FUGITIVE EMISSION
50005	PETROCHEM - Benzene		
		30125801	CHEM MFG ORGANIC CHEMCLS BENZENE GENERAL
		30125802	CHEM MFG ORGANIC CHEMCLS BENZENE REACTOR
		30125803	CHEM MFG ORGANIC CHEMCLS BENZENE DISTILLATION UNIT

SIC	SIC Name	SCC	SCC Name
50005	PETROCHEM - Benzene		
		30125880	CHEM MFG ORGANIC CHEMCLS AROMATICS PROD FUGITIVE EMISSION
		40703601	ORGANIC CHEM STRG FIXED ROOF TANKS BENZENE BREATHING LOSS
		40703602	ORGANIC CHEM STRG FIXED ROOF TANKS BENZENE WORKING LOSS
50006	PETROCHEM - n-Butyraldehyde		
		30112021	CHEM MFG ORGANIC CHEMCLS BUTYRALDEHYDE GENERAL
		40717205	ORGNC CHEM STRG FLT ROOF TANK N-BUTRALDEHYDE STAND STRG LOSS
		40717206	ORGNC CHEM STRG FLT ROOF TANK N-BUTRALDEHYDE WITHDRAWAL LOSS
50008	PETROCHEM - Butylenes		
		30119710	CHEM MFG ORGANIC CHEMCLS OLEFIN PRODUCTION BUTYLENE
50009	PETROCHEM - Butyl Rubber		
		30102601	CHEM MFG PLASTICS PRODN SYNTHETIC RUBBER STY-BUTDIENE(SBR)
		30102602	CHEM MFG PLASTICS PRODN SYNTHETIC RUBBER ISOBUTYLNE(BUTYL)
50010	PETROCHEM - Benzoic Acid		
		40703615	ORGANIC CHEM STRG FIXED ROOF TANKS TOLUENE BREATHING LOSS
		40703616	ORGANIC CHEM STRG FIXED ROOF TANKS TOLUENE WORKING LOSS
50011	PETROCHEM - Cellulose acetate	30102505	CHEM MFG PLASTICS PRODN CELLULOSIC FIBER ACETATE
50012	PETROCHEM - Cumene		
		30115601	CHEM MFG ORGANIC CHEMCLS CUMENE GENERAL
		30115602	CHEM MFG ORGANIC CHEMCLS CUMENE BENZENE DRYNG CLM
		30115603	CHEM MFG ORGANIC CHEMCLS CUMENE CTLYT MIX TNK SRB
		30115604	CHEM MFG ORGANIC CHEMCLS CUMENE WASH-DECNTR VENT
		30115605	CHEM MFG ORGANIC CHEMCLS CUMENE BENZENE RECOVERY
		30115606	CHEM MFG ORGANIC CHEMCLS CUMENE CUMENE DSTLTN VNT
		30115607	CHEM MFG ORGANIC CHEMCLS CUMENE DIPB STRIPPNG VNT
		30115680	CHEM MFG ORGANIC CHEMCLS CUMENE FUGITIVE EMISSION
		40703601	ORGANIC CHEM STRG FIXED ROOF TANKS BENZENE BREATHING LOSS
		40703602	ORGANIC CHEM STRG FIXED ROOF TANKS BENZENE WORKING LOSS
		40703605	ORGANIC CHEM STRG FIXED ROOF TANKS CUMENE BREATHING LOSS
		40703606	ORGANIC CHEM STRG FIXED ROOF TANKS CUMENE WORKING LOSS
50013	PETROCHEM - Cyclohexane		
		30115701	CHEM MFG ORGANIC CHEMCLS CYCLOHEXANE GENERAL
		30115702	CHEM MFG ORGANIC CHEMCLS CYCLOHEXANE BLOWDOWN TANK
		30115704	CHEM MFG ORGANIC CHEMCLS CYCLOHEXANE CATALYST REPLACMT
		30115780	CHEM MFG ORGANIC CHEMCLS CYCLOHEXANE FUGITIVE EMISSION
		40703601	ORGANIC CHEM STRG FIXED ROOF TANKS BENZENE BREATHING LOSS
		40703602	ORGANIC CHEM STRG FIXED ROOF TANKS BENZENE WORKING LOSS
		40717601	ORGANIC CHEM STRG FLT ROOF TNK CYCLOHEXANE STAND STRG LOSS
		40717602	ORGANIC CHEM STRG FLT ROOF TNK CYCLOHEXANE WITHDRAWAL LOSS
50015	PETROCHEM - Ethylene Dichloride		
		30112501	CHEM MFG ORGANIC CHEMCLS ETHYLENE DICHLORD OXYCHLORINATION
		30112502	CHEM MFG ORGANIC CHEMCLS ETHYLENE DICHLORD DIRECT CHLORINATN
		30112504	CHEM MFG ORGANIC CHEMCLS ETHYLENE DICHLORD CAUSTIC SCRUBBER
		30112505	CHEM MFG ORGANIC CHEMCLS ETHYLENE DICHLORD REACTOR VESSEL
		30112506	CHEM MFG ORGANIC CHEMCLS ETHYLENE DICHLORD DISTILLATION UNIT
		30112509	CHEM MFG ORGANIC CHEMCLS ETHYLENE DICHLORD FUGITIVE EMISSION
		40706017	ORGNC CHEM STRG FXD ROOF TNK ETHYLENE DICHLORD BREATHNG LOSS
		40706018	ORGNC CHEM STRG FXD ROOF TNK ETHYLENE DICHLORD WORKING LOSS
50016	PETROCHEM - Ethylene Glycols		
		30125102	CHEM MFG ORGANIC CHEMCLS ETHYLENE GLYCOL EVAPORATOR PRG VT
		30125103	CHEM MFG ORGANIC CHEMCLS ETHYLENE GLYCOL H2O REMVL EJCTR
		30125104	CHEM MFG ORGANIC CHEMCLS ETHYLENE GLYCOL DISTILLTN CLM VNT
		30125180	CHEM MFG ORGANIC CHEMCLS ETHYLENE GLYCOL FUGITIVE EMISSION
		40705603	ORGNC CHEM STRG FXD ROOF TNK ETHYLENE GLYCOL BREATHING LOSS
		40705604	ORGANIC CHEM STRG FXD ROOF TNK ETHYLENE GLYCOL WORKING LOSS
50017	PETROCHEM - Ethylene Oxide		
		30117410	CHEM MFG ORGANIC CHEMCLS ETHYLENE OXIDE OXGN-OXDTN/CO2 VT
		30117411	CHEM MFG ORGANIC CHEMCLS ETHYLENE OXIDE OXGN-OXDTN/ARG VT
		30117421	CHEM MFG ORGANIC CHEMCLS ETHYLENE OXIDE STRPPR PRGE VENT
		30117480	CHEM MFG ORGANIC CHEMCLS ETHYLENE OXIDE FUGITIVE EMISSION
		40784801	ORGNC CHEM STRG PRESSURE TNKS ETHYLENE OXIDE WITHDRAWAL LOSS
50018	PETROCHEM - Epoxy Resins		
		30101847	CHEM MFG PLASTICS PRODN EPOXY RESINS GENERAL
50019	PETROCHEM - Ethanolamines		
		30103410	CHEM MFG ORGANIC CHEMCLS ETHANOLAMINES GENERAL
		30103411	CHEM MFG ORGANIC CHEMCLS ETHANOLAMINES AMMONIA SCRBR VNT
		30103412	CHEM MFG ORGANIC CHEMCLS ETHANOLAMINES VCUM DSTL JET VNT
		30103414	CHEM MFG ORGANIC CHEMCLS ETHANOLAMINES FUGITIVE EMISSION
		40703203	ORGANIC CHEM STRG FXD ROOF TNK ETHANOLAMINES BREATHING LOSS
		40703204	ORGANIC CHEM STRG FXD ROOF TNK ETHANOLAMINES WORKING LOSS
50020	PETROCHEM - Ethyl Benzene		
		30116901	CHEM MFG ORGANIC CHEMCLS ETHYLBENZENE GENERAL
		30116902	CHEM MFG ORGANIC CHEMCLS ETHYLBENZENE ALKYLTN RCTR VENT
		30116903	CHEM MFG ORGANIC CHEMCLS ETHYLBENZENE BENZENE DRYING
		30116904	CHEM MFG ORGANIC CHEMCLS ETHYLBENZENE BENZENE RCVRY/RCY

SIC	SIC Name	SCC	SCC Name
50020	PETROCHEM - Ethyl Benzene		
		30116905	CHEM MFG ORGANIC CHEMCLS ETHYLBENZENE ETHYLBNZ RECOVRY
		30116906	CHEM MFG ORGANIC CHEMCLS ETHYLBENZENE PLYETHYLBNZ RCVRY
		30116980	CHEM MFG ORGANIC CHEMCLS ETHYLBENZENE FUGITIVE EMISSION
		40703601	ORGANIC CHEM STRG FIXED ROOF TANKS BENZENE BREATHING LOSS
		40703602	ORGANIC CHEM STRG FIXED ROOF TANKS BENZENE WORKING LOSS
		40703609	ORGANIC CHEM STRG FXD ROOF TNK ETHYLBENZENE BREATHING LOSS
		40703610	ORGANIC CHEM STRG FIXED ROOF TANKS ETHYLBENZENE WORKING LOSS
50021	PETROCHEM - Ethylene		
		30119701	CHEM MFG ORGANIC CHEMCLS ETHYLENE PRODCTN GENERAL
		30119741	CHEM MFG ORGANIC CHEMCLS ETHYLENE PRODCTN FLUE GAS VENT
		30119742	CHEM MFG ORGANIC CHEMCLS ETHYLENE PRODCTN PYROLYSIS FRN DCK
		30119743	CHEM MFG ORGANIC CHEMCLS ETHYLENE PRODCTN ACID GAS REMOVAL
		30119744	CHEM MFG ORGANIC CHEMCLS ETHYLENE PRODCTN CATALYST REGNRTN
		30119745	CHEM MFG ORGANIC CHEMCLS ETHYLENE PRODCTN CMPSSR LUB OIL VT
		30119749	CHEM MFG ORGANIC CHEMCLS ETHYLENE PRODCTN FUGITIVE EMISSION
		40701611	ORGANIC CHEM STRG FIXED ROOF TANKS NAPHTHA BREATHING LOSS
		40701612	ORGANIC CHEM STRG FIXED ROOF TANKS NAPHTHA WORKING LOSS
50022	PETROCHEM - 2-Ethyl Hexanol		
		30125021	CHEM MFG ORGANIC CHEMCLS ALCOHOLS BY OXO PROCESS
		40700807	ORGANIC CHEM STRG FXD ROOF TNK CYCLOHEXANOL BREATHING LOSS
		40700808	ORGANIC CHEM STRG FIXED ROOF TANKS CYCLOHEXANOL WORKING LOSS
50024	PETROCHEM - Ethyl Alcohol		
		30125005	CHEM MFG ORGANIC CHEMCLS ALCOHOLS-ETHANOL FROM ETHYLENE
		40700809	ORGANIC CHEM STRG FXD ROOF TNK ETHYL ALCOHOL BREATHING LOSS
		40700810	ORGANIC CHEM STRG FXD ROOF TNK ETHYL ALCOHOL WORKING LOSS
50025	PETROCHEM - Formaldehyde		
		30112002	CHEM MFG ORGANIC CHEMCLS FORMALDEHYDE MIXED OXIDE CTLST
		30112005	CHEM MFG ORGANIC CHEMCLS FORMALDEHYDE ABSORBER VENT
		30112006	CHEM MFG ORGANIC CHEMCLS FORMALDEHYDE FRACTIONATOR VENT
		30112007	CHEM MFG ORGANIC CHEMCLS FORMALDEHYDE FUGITIVE EMISSION
		40700815	ORGANIC CHEM STRG FXD ROOF TNK METHYL ALCOHOL BREATHING LOSS
		40700816	ORGANIC CHEM STRG FXD ROOF TNK METHYL ALCOHOL WORKING LOSS
		40717207	ORGNC CHEM STRG FLT ROOF TANK FORMALIN STANDING LOSS
		40717208	ORGNC CHEM STRG FLT ROOF TANK FORMALIN WITHDRAWAL LOSS
50026	PETROCHEM - Hexamethylene Diamine	30103420	CHEM MFG ORGANIC CHEMCLS AMINES/AMIDES HEXAMETHYLENEDIAM
50027	PETROCHEM - Hexamethylene Tetramine	30103425	CHEM MFG ORGANIC CHEMCLS AMINES/AMIDES HEX-METH-TETRA-AM
50028	PETROCHEM - Iso-Propyl Alcohol		
		30125015	CHEM MFG ORGANIC CHEMCLS ALCOHOLS PROD ISOPROPANOL
		40700813	ORGNC CHEM STRG FXD ROOF TNK ISOPROPYL ALCOHOL BREATHNG LOSS
		40700814	ORGNC CHEM STRG FXD ROOF TNK ISOPROPYL ALCOHOL WORKING LOSS
50029	PETROCHEM - Methanol		
		30125001	CHEM MFG ORGANIC CHEMCLS METHANOL PRODCTN GENERAL
		30125002	CHEM MFG ORGANIC CHEMCLS METHANOL PRODCTN PURGE GAS VENT
		30125003	CHEM MFG ORGANIC CHEMCLS METHANOL PRODCTN DISTILLATION VENT
		30125004	CHEM MFG ORGANIC CHEMCLS METHANOL PRODCTN FUGITIVE EMISSION
		40700815	ORGANIC CHEM STRG FXD ROOF TNK METHYL ALCOHOL BREATHING LOSS
		40700816	ORGANIC CHEM STRG FXD ROOF TNK METHYL ALCOHOL WORKING LOSS
50032	PETROCHEM - Nylon	30101827	CHEM MFG PLASTICS PRODN POLYAMIDE RESINS GENERAL
50034	PETROCHEM - Polyethylene - high density		
		30101808	CHEM MFG PLASTICS PRODN POLYETHYLENE H D MONOMER/SLVNT RCV
		30101809	CHEM MFG PLASTICS PRODN POLYETHYLENE H D EXTRUDER
		30101810	CHEM MFG PLASTICS PRODN POLYETHYLENE H D CONVEYING
		30101811	CHEM MFG PLASTICS PRODN POLYETHYLENE H D STORAGE
50035	PETROCHEM - Polyethylene - low density		
		30101812	CHEM MFG PLASTICS PRODN POLYETHYLENE L D GENERAL
		30101813	CHEM MFG PLASTICS PRODN POLYETHYLENE L D RCVRY/PURFCTN SYS
		30101814	CHEM MFG PLASTICS PRODN POLYETHYLENE L D EXTRUDER
		30101815	CHEM MFG PLASTICS PRODN POLYETHYLENE L D PELLET SILO
		30101816	CHEM MFG PLASTICS PRODN POLYETHYLENE L D TRNSFR/HNDL/LD/PK
50036	PETROCHEM - Polyethylen-linear low densi		
		30101808	CHEM MFG PLASTICS PRODN POLYETHYLENE H D MONOMER/SLVNT RCV
		30101809	CHEM MFG PLASTICS PRODN POLYETHYLENE H D EXTRUDER
		30101810	CHEM MFG PLASTICS PRODN POLYETHYLENE H D CONVEYING
		30101811	CHEM MFG PLASTICS PRODN POLYETHYLENE H D STORAGE
50037	PETROCHEM - Pentaerythitol	30125099	CHEM MFG ORGANIC CHEMCLS ALCOHOLS PROD NOT CLASSIFIED
50038	PETROCHEM - Polyetherpolyols		
		30125301	CHEM MFG ORGANIC CHEMCLS GLYCOL ETHERS GENERAL
		30125302	CHEM MFG ORGANIC CHEMCLS GLYCOL ETHERS VACUUM SYSTM VENT
		30125305	CHEM MFG ORGANIC CHEMCLS GLYCOL ETHERS CTYLST-MTHNL TNK
		30125306	CHEM MFG ORGANIC CHEMCLS GLYCOL ETHERS METHANL RCVRY CLM
		30125315	CHEM MFG ORGANIC CHEMCLS GLYCOL ETHERS CTYLST-ETHNL TNK

SIC	SIC Name	SCC	SCC Name
50038	PETROCHEM - Polyetherpolyols	30125316	CHEM MFG ORGANIC CHEMCLS GLYCOL ETHERS ETHANOL RCVRY CLM
		30125326	CHEM MFG ORGANIC CHEMCLS GLYCOL ETHERS BUTANOL RCVRY CLM
		30125380	CHEM MFG ORGANIC CHEMCLS GLYCOL ETHERS FUGITIVE EMISSION
50039	PETROCHEM - Polyethylene terephthaliate	30101837	CHEM MFG PLASTICS PRODN POLYESTER RESINS GENERAL
		30101838	CHEM MFG PLASTICS PRODN POLYESTER/ALKYD REACTOR KETTLE
		30101839	CHEM MFG PLASTICS PRODN POLYESTER/ALKYD RESIN THINNG TANK
		30101840	CHEM MFG PLASTICS PRODN POLYESTER/ALKYD RESIN STORGE TANK
50040	PETROCHEM - Propylene Glycols	30119709	CHEM MFG ORGANIC CHEMCLS PROPYLENE FUGITIVE EMISSION
		40705609	ORGNC CHEM STRG FXD ROOF TNK PROPYLENE GLYCOL BREATHING LOSS
		40705610	ORGANIC CHEM STRG FXD ROOF TNK PROPYLENE GLYCOL WORKING LOSS
50041	PETROCHEM - Phthallic Anhydride	30101901	CHEM MFG ORGANIC CHEMCLS PHTHALIC ANHYDRID XYLENE OXDN-RXR
		30101902	CHEM MFG ORGANIC CHEMCLS PHTHALIC ANHYDRID XYLENE OXDN-TREAT
		30101904	CHEM MFG ORGANIC CHEMCLS PHTHALIC ANHYDRID XYLENE OXDN-DISTN
		40703619	ORGANIC CHEM STRG FIXED ROOF TANKS O-XYLENE BREATHING LOSS
		40703620	ORGANIC CHEM STRG FIXED ROOF TANKS O-XYLENE WORKING LOSS
50042	PETROCHEM - Phenol Formaldehyde Resin	30101805	CHEM MFG PLASTICS PRODN PHENOLIC RESINS GENERAL
		40708403	ORGANIC CHEM STRG FIXED ROOF TANKS PHENOL BREATHING LOSS
		40708404	ORGANIC CHEM STRG FIXED ROOF TANKS PHENOL WORKING LOSS
		40717207	ORGNC CHEM STRG FLT ROOF TANK FORMALIN STANDING LOSS
		40717208	ORGNC CHEM STRG FLT ROOF TANK FORMALIN WITHDRAWAL LOSS
50043	PETROCHEM - Phenol	30120201	CHEM MFG ORGANIC CHEMCLS PHENOL GENERAL
		30120202	CHEM MFG ORGANIC CHEMCLS PHENOL CUMENE OXIDATION
		30120203	CHEM MFG ORGANIC CHEMCLS PHENOL CHP CONCENTRATOR
		30120204	CHEM MFG ORGANIC CHEMCLS PHENOL LIGHT-ENDS DSTL V
		30120206	CHEM MFG ORGANIC CHEMCLS PHENOL PHENOL DSTLLT CLM
		30120210	CHEM MFG ORGANIC CHEMCLS PHENOL OXIDATE WSH/SEPTN
		30120211	CHEM MFG ORGANIC CHEMCLS PHENOL CHP CLEAVAGE VENT
		30120280	CHEM MFG ORGANIC CHEMCLS PHENOL FUGITIVE EMISSION
		40703605	ORGANIC CHEM STRG FIXED ROOF TANKS CUMENE BREATHING LOSS
		40703606	ORGANIC CHEM STRG FIXED ROOF TANKS CUMENE WORKING LOSS
		40708403	ORGANIC CHEM STRG FIXED ROOF TANKS PHENOL BREATHING LOSS
		40708404	ORGANIC CHEM STRG FIXED ROOF TANKS PHENOL WORKING LOSS
50044	PETROCHEM - Propylene Oxide	30120502	CHEM MFG ORGANIC CHEMCLS PROPYLENE OXIDE CHLOROHYDNTN PROC
		30120503	CHEM MFG ORGANIC CHEMCLS PROPYLENE OXIDE VENT GAS SCRUBBR
		30120504	CHEM MFG ORGANIC CHEMCLS PROPYLENE OXIDE SAPONIFICTN CLMN
		30120505	CHEM MFG ORGANIC CHEMCLS PROPYLENE OXIDE PO STRPPNG COLMN
		30120506	CHEM MFG ORGANIC CHEMCLS PROPYLENE OXIDE LIGHTS STRPPNG CL
		30120507	CHEM MFG ORGANIC CHEMCLS PROPYLENE OXIDE PO FNL DISTLTN
		30120508	CHEM MFG ORGANIC CHEMCLS PROPYLENE OXIDE DCP DISTLTN COLMN
		30120509	CHEM MFG ORGANIC CHEMCLS PROPYLENE OXIDE DCIPE DSTLTN COLM
50045	PETROCHEM - Polystyrene	30101817	CHEM MFG PLASTICS PRODN POLYSTYRENE GENERAL
		30101818	CHEM MFG PLASTICS PRODN POLYSTYRENE REACTOR
		30101819	CHEM MFG PLASTICS PRODN POLYSTYRENE SOLVENT RECOVERY
		30101820	CHEM MFG PLASTICS PRODN POLYSTYRENE POLYMER DRYING
		30101821	CHEM MFG PLASTICS PRODN POLYSTYRENE EXTRD/PLTZ/CNVY/S
		40703613	ORGANIC CHEM STRG FIXED ROOF TANKS STYRENE BREATHING LOSS
		40703614	ORGANIC CHEM STRG FIXED ROOF TANKS STYRENE WORKING LOSS
50046	PETROCHEM - Polypropylene	30101802	CHEM MFG PLASTICS PRODN POLYPROPYLENE GENERAL
		40782006	ORGANIC CHEM STRG PRESSURE TANKS PROPYLENE WITHDRAWAL LOSS
50047	PETROCHEM - Propylene	30119705	CHEM MFG ORGANIC CHEMCLS PROPYLENE GENERAL
		30119706	CHEM MFG ORGANIC CHEMCLS PROPYLENE REACTOR
		30119707	CHEM MFG ORGANIC CHEMCLS PROPYLENE DRYING TOWER
		30119708	CHEM MFG ORGANIC CHEMCLS PROPYLENE LIGHT-ENDS STRPPR
		30119709	CHEM MFG ORGANIC CHEMCLS PROPYLENE FUGITIVE EMISSION
50048	PETROCHEM - Polyvinylchloride	30101801	CHEM MFG PLASTICS PRODN POLYVINYL CHLORID GENERAL
		40786004	ORGNC CHEM STRG PRESSURE TNKS VINYL CHLORIDE WITHDRAWAL LOSS
50049	PETROCHEM - Styrene Butadiene Latex	30120680	CHEM MFG ORGANIC CHEMCLS STYRENE FUGITIVE EMISSION
50051	PETROCHEM - Styrene	30120601	CHEM MFG ORGANIC CHEMCLS STYRENE GENERAL
		30120602	CHEM MFG ORGANIC CHEMCLS STYRENE BENZENE RECYCLE
		30120603	CHEM MFG ORGANIC CHEMCLS STYRENE STYRENE PURFICATN
		30120680	CHEM MFG ORGANIC CHEMCLS STYRENE FUGITIVE EMISSION
		40703613	ORGANIC CHEM STRG FIXED ROOF TANKS STYRENE BREATHING LOSS
		40703614	ORGANIC CHEM STRG FIXED ROOF TANKS STYRENE WORKING LOSS

SIC	SIC Name	SCC	SCC Name
50052	PETROCHEM - Tetraethyl Lead		
		30104201	CHEM MFG ORGANIC CHEMCLS LEAD ALKYL-NA/PB RECOVERY FURNACE
		30104202	CHEM MFG ORGANIC CHEMCLS LEAD ALKYL-NA/PB PROCESS VENTS-TEL
		30104204	CHEM MFG ORGANIC CHEMCLS LEAD ALKYL-NA/PB SLUDGE PITS
		40786001	ORGNC CHEM STRG PRESSURE TNKS ETHYL CHLORIDE WITHDRAWAL LOSS
50053	PETROCHEM - Toluene		
		30125805	CHEM MFG ORGANIC CHEMCLS TOLUENE GENERAL
		30125806	CHEM MFG ORGANIC CHEMCLS TOLUENE REACTOR
		30125807	CHEM MFG ORGANIC CHEMCLS TOLUENE DISTILLATION UNIT
		30125880	CHEM MFG ORGANIC CHEMCLS AROMATICS PROD FUGITIVE EMISSION
		40703615	ORGANIC CHEM STRG FIXED ROOF TANKS TOLUENE BREATHING LOSS
		40703616	ORGANIC CHEM STRG FIXED ROOF TANKS TOLUENE WORKING LOSS
50054	PETROCHEM - Urea Formaldehyde Resin	30101832	CHEM MFG PLASTICS PRODN UREA FRMLDHYDE RS GENERAL
50055	PETROCHEM - Vinyl Acetate		
		30116701	CHEM MFG ORGANIC CHEMCLS VINYL ACETATE GENERAL
		30116702	CHEM MFG ORGANIC CHEMCLS VINYL ACETATE INERT-GAS PRG VNT
		30116703	CHEM MFG ORGANIC CHEMCLS VINYL ACETATE CO2 PRGE VENT
		30116704	CHEM MFG ORGANIC CHEMCLS VINYL ACETATE INNBTR MIX TK
		30116780	CHEM MFG ORGANIC CHEMCLS VINYL ACETATE FUGITIVE EMISSION
50056	PETROCHEM - Vinyl Chloride		
		30112540	CHEM MFG ORGANIC CHEMCLS VINYL CHLORIDE GENERAL
		30112541	CHEM MFG ORGANIC CHEMCLS VINYL CHLORIDE CRACKING FURNACE
		30112542	CHEM MFG ORGANIC CHEMCLS VINYL CHLORIDE HCL RECOVERY
		30112543	CHEM MFG ORGANIC CHEMCLS VINYL CHLORIDE LIGHT-ENDS RCVRY
		30112544	CHEM MFG ORGANIC CHEMCLS VINYL CHLORIDE DRY CLMN/DICHLORE
		30112545	CHEM MFG ORGANIC CHEMCLS VINYL CHLORIDE DRY CLMN/VCM
		30112546	CHEM MFG ORGANIC CHEMCLS VINYL CHLORIDE PRDCT RCVRY STILL
		30112547	CHEM MFG ORGANIC CHEMCLS VINYL CHLORIDE CRCKNG FRN DECKNG
		30112550	CHEM MFG ORGANIC CHEMCLS VINYL CHLORIDE FUGITIVE EMISSION
		40786004	ORGNC CHEM STRG PRESSURE TNKS VINYL CHLORIDE WITHDRAWAL LOSS
50057	PETROCHEM - Xylenes		
		30125815	CHEM MFG ORGANIC CHEMCLS MIXED XYLENES GENERAL
		30125816	CHEM MFG ORGANIC CHEMCLS MIXED XYLENES REACTOR
		30125817	CHEM MFG ORGANIC CHEMCLS MIXED XYLENES DISTILLATION UNIT
		30125880	CHEM MFG ORGANIC CHEMCLS AROMATICS PROD FUGITIVE EMISSION
		40703623	ORGANIC CHEM STRG FXD ROOF TNK XYLENES,MIXED BREATHING LOSS
		40703624	ORGANIC CHEM STRG FXD ROOF TNK XYLENES,MIXED WORKING LOSS
50900	URBAN TRANSIT SYSTEMS		
		10200201	EXTCOMB BOILER INDUSTRIAL BITUMINOUS COAL PULV COAL WET BOT
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10300501	EXTCOMB BOILER COM-INSTUTNL DISTILLATE OIL NO 1 AND NO 2 OIL
51111	GASOLINE FUEL MARKETING		
		00027110	DIESEL AND GASOLINE MARKETING - REFINERY STORAGE TRANSFE
		00027111	DIESEL AND GASOLINE MARKETING - FILLING VEHICLE TANK
		00027130	DIESEL AND GASOLINE MARKETING - STATION STORAGE TRANSFER
		00027140	DIESEL AND GASOLINE MARKETING - VAPOR LOSS AT STATIONS
		00027150	DIESEL AND GASOLINE MARKETING - TRANSFER TO CARS
		00027160	DIESEL AND GASOLINE MARKETING - SPILLAGE AT STATION
		40301019	PETRO IND E FIXED ROOF TNKS DIST FUEL NO.2 67K BBL-BREATHING
		40301021	PETRO IND E FIXED ROOF TANKS DIST FUEL NO.2 WORKING LOSS
		40400291	BULK PLANT\65 M3 FIX. ROOF TNK\GAS RVP13 BREATHING LOSSES
		40400294	BULK PLANT\65 M3 FIX. ROOF TNK\GAS RVP13 WORKING LOSSES
		40400297	PET STG\BULK PLANT\1000M3 FL. ROOF GAS RVP13 STANDING LOSSES
		40400298	PET. STG\BULK PLANT\1000M3 FL. ROOF GAS RVP13 WITHDRAWAL LOS
		40600131	ROOF TNK TANK CARS/TRUCKS GASOLINE-SUBMERGE LOAD-NORMAL SVC
		40600135	ROOF TNK TANK CARS/TRUCKS DIST OIL-SUBMERGE LOAD-NORMAL SVC
51112	DIESEL OIL MARKETING		
		00027120	DIESEL AND GASOLINE MARKETING - DIESEL EVAPORATION
51700	OTHER TRANSPORT SERVICES		
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
56221	RESIDENTIAL FUEL COMBUSTION		
		00011100	FUEL COMBUSTION - STATIONARY SOURCE - RESIDENTIAL NAT. G
		00011200	FUEL COMB - STATIONARY SOURCE - RESIDENTIAL - LIQUID PET GAS
		00011300	FUEL COMB - STATIONARY SOURCE - RESIDENTIAL KEROSENE
		00011400	FUEL COMB - STATIONARY SOURCE - RESIDENTIAL COAL
		00011510	FUEL COMB - STATIONARY SOURCE - RESIDENTIAL DISTILLATE O
		00011520	FUEL COMB - STATIONARY SOURCE - RESIDENTIAL RESIDUAL OIL
56222	COMMERCIAL FUEL COMBUSTION		
		00012100	FUEL COMB - STATIONARY SOURCE - COMMERCIAL NATURAL GAS
		00012200	FUEL COMB - STATIONARY SOURCE - COMMERCIAL LIQUID PETROL
		00012300	FUEL COMB - STATIONARY SOURCE - COMMERCIAL KEROSENE
		00012400	FUEL COMB - STATIONARY SOURCE - COMMERCIAL COAL
		00012510	FUEL COMB - STATIONARY SOURCE - COMMERCIAL DISTILLATE OI
		00012520	FUEL COMB - STATIONARY SOURCE - COMMERCIAL RESIDUAL OIL

SIC	SIC Name	SCC	SCC Name
56223	INDUSTRIAL FUEL COMBUSTION	00013100	FUEL COMB - STATIONARY SOURCE - INDUSTRIAL NATURAL GAS
		00013200	FUEL COMB - STATIONARY SOURCE - INDUSTRIAL NATURAL GAS L
		00013300	FUEL COMB - STATIONARY SOURCE - INDUSTRIAL KEROSENE
		00013400	FUEL COMB - STATIONARY SOURCE - INDUSTRIAL COAL
		00013510	FUEL COMB - STATIONARY SOURCE - INDUSTRIAL DISTILLATE OI
		00013520	FUEL COMB - STATIONARY SOURCE - INDUSTRIAL RESIDUAL OIL
56224	FUELWOOD COMBUSTION	00011610	FUEL COMB - STATIONARY SOURCE - FUELWOOD CONVENTIONAL ST
		00011620	FUEL COMB - STATIONARY SOURCE - SLOW COMBUSTION STOVE
		00011630	FUEL COMB - STATIONARY SOURCE - FIREPLACE
		00011640	FUEL COMB - STATIONARY SOURCE - FURNACE
57400	GAS DISTRIBUTION	10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
57900	OTHER UTILITIES (INCINERATION)	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
59190	OTHER WASTE MATERIALS, WHOLESALE	10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		30400101	SECONDARY METALS SEC. ALUMINUM SWEATING FURNACE
		30400208	SECONDARY METALS SEC. COPPER WIRE BURNING INCINERATOR
		30900205	FAB METAL ABRASIVE BLASTNG OF METAL PARTS STEEL GRIT ABRSVE
		30902501	FABRICATED METALS DRUMS/BARRELS DRUM CLEANING DRUM BURNING
		40202607	ORGANIC SOLVENT SURFACE COATING STEEL DRUMS EXTERIOR COATING
63520	PAINT AND BODY REPAIR SHOPS	30703096	WOOD PRODUCTS MISCELLANEOUS SANDING/PLANING SEE COMMENT
		40200401	ORGANIC SOLVENT SURFACE COATING LACQUER GENERAL
		40201901	ORGNC SOLVNT SURFACE COATNG WOOD FURNITURE COATING OPERATION
64200	DEPARTMENT STORES	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		40200501	ORGANIC SOLVENT SURFACE COATING ENAMEL GENERAL
65321	INTERIOR-FINISHIN WORK	00070000	GENERAL SOLVENT USE
70200	SAVINGS CREDIT INSTITUTIONS	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
72500	INSURANCE, REAL ESTATE AGENCIES	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
80100	ELEMENTARY & SECONDARY SCHOOLS	10300401	EXTCOMB BOILER COMMERCL-INSTUTNL RESIDUAL OIL NO 6 OIL
80500	UNIVERSITIES & COLLEGES	10200504	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 4 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10300401	EXTCOMB BOILER COMMERCL-INSTUTNL RESIDUAL OIL NO 6 OIL
		10300501	EXTCOMB BOILER COM-INSTUTNL DISTILLATE OIL NO 1 AND NO 2 OIL
		10300504	EXTCOMB BOILER COMMERCL-INSTUTNL DISTILLATE OIL NO 4 OIL
		10300601	EXTCOMB BOILER COMMERCL-INSTUTNL NATURAL GAS >100MMBTU/HR
		10301201	EXTCOMB BOILR COM-INSTL SLD WASTE-SPECIFY SPEC MAT COMM FLD
80900	EDUCATION RELATED SERVICES	10300404	EXTCOMB BOILER COMMERCL-INSTUTNL RESIDUAL OIL NO 5 OIL
		10300501	EXTCOMB BOILER COM-INSTUTNL DISTILLATE OIL NO 1 AND NO 2 OIL
82240	FIREFIGHTING SERVICES	00047200	STRUCTURAL FIRES
82700	OTHER HEALTH SERVICES	10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200504	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 4 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10300401	EXTCOMB BOILER COMMERCL-INSTUTNL RESIDUAL OIL NO 6 OIL
		10300501	EXTCOMB BOILER COM-INSTUTNL DISTILLATE OIL NO 1 AND NO 2 OIL
		10300601	EXTCOMB BOILER COMMERCL-INSTUTNL NATURAL GAS >100MMBTU/HR
83100	RELIGIOUS ORGANIZATIONS	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
83590	GENERAL ADMINISTRATIVE SERVICES	30500201	PETROLEUM INDRY ASPHALT CONCRETE ROTARY DRYER CONVENTNL PLNT
		30500205	PETROLEUM INDRY ASPHALT CONCRETE DRUM DRYER HOT ASPHALT PLNT
85900	OTHER RECREATIONAL SERVICES	10300601	EXTCOMB BOILER COMMERCL-INSTUTNL NATURAL GAS >100MMBTU/HR
86110	GENERAL HOSPITALS	10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10300401	EXTCOMB BOILER COMMERCL-INSTUTNL RESIDUAL OIL NO 6 OIL
		10300404	EXTCOMB BOILER COMMERCL-INSTUTNL RESIDUAL OIL NO 5 OIL
		10300501	EXTCOMB BOILER COM-INSTUTNL DISTILLATE OIL NO 1 AND NO 2 OIL
		10300504	EXTCOMB BOILER COMMERCL-INSTUTNL DISTILLATE OIL NO 4 OIL

SIC	SIC Name	SCC	SCC Name
86110	GENERAL HOSPITALS		
		10300601	EXTCOMB BOILER COMMERCL-INSTUTNL NATURAL GAS >100MMBTU/HR
		10500106	EXTCOMB BOILER SPACE HEATER INDUSTRIAL NATURAL GAS
86900	OTHER BUS. MANAG. SERVICES	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
87500	HOTELS, RESTAURANT, TAVERNS	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
89900	OTHER MISCELANEOUS SERVICES	10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
90200	DEFENCE SERVICES		
		10300401	EXTCOMB BOILER COMMERCL-INSTUTNL RESIDUAL OIL NO 6 OIL
		10300404	EXTCOMB BOILER COMMERCL-INSTUTNL RESIDUAL OIL NO 5 OIL
		10300501	EXTCOMB BOILER COM-INSTUTNL DISTILLATE OIL NO 1 AND NO 2 OIL
		10300504	EXTCOMB BOILER COMMERCL-INSTUTNL DISTILLATE OIL NO 4 OIL
		10300601	EXTCOMB BOILER COMMERCL-INSTUTNL NATURAL GAS >100MMBTU/HR
91110	HOTELS AND MOTOR HOTELS		
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
95100	LOCAL ADMINISTRATION		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
96530	SPORTS & RECREATION CLUBS AND SERVICES	20100102	INTERNLCOMBUSTION ELEC GEN. DIST.OIL/DIESEL RECIPROCATING
97211	DRY CLEANING PLANTS		
		00071000	DRY CLEANING
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		40100103	ORGANIC SOLVENT DRY CLEANING PERCHLOROETHYLENE GENERAL
99100	OTHER GOVERNMENT OFFICES		
		10100601	EXTCOMB BOILER ELEC GENERATN NATURAL GAS >100MMBTU/HR EXTF
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10300401	EXTCOMB BOILER COMMERCL-INSTUTNL RESIDUAL OIL NO 6 OIL
		10300501	EXTCOMB BOILER COM-INSTUTNL DISTILLATE OIL NO 1 AND NO 2 OIL
		10300601	EXTCOMB BOILER COMMERCL-INSTUTNL NATURAL GAS >100MMBTU/HR
99210	APARTMENT GAS-OIL-COAL		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
99990	UNCODED OR UNDEFINED INDUSTRIAL ACTIVITY		
		10200401	EXTCOMB BOILER INDUSTRIAL RESIDUAL OIL NO 6 OIL
		10200501	EXTCOMB BOILER INDUSTRIAL DISTILLATE OIL NO 1 AND NO 2 OIL
		10200601	EXTCOMB BOILER INDUSTRIAL NATURAL GAS >100MMBTU/HR
		10200602	EXTCOMB BOILER INDUSTRIAL NATURAL GAS 10-100MMBTU/HR
		10200691	EXT COM BOILER IND \NATURAL GAS \100+ GJ/H \B.C.
		10201002	EXTCOMB BOILER INDUSTRIAL LIQ PETROLEUM GAS PROPANE
		20100102	INTERNLCOMBUSTION ELEC GEN. DIST.OIL/DIESEL RECIPROCATING
		30100802	CHEM MFG INORGANIC CHEMCLS CHLORO-ALKALI LIQFN-MERCURY CEL
		30100899	CHEM MFG INORGANIC CHEMCLS CHLORO-ALKALI OTHER/NOT CLASI**
		30101699	CHEM MFG AGRICULTRL CHEM PHOS ACD/WET PROC NOT CLASSIFIED **
		30101860	CHEM MFG PLASTICS PRODN POLYETHYLENE RECOVERY SYSTEM
		30101863	CHEM MFG PLASTICS PRODN POLYETHYLENE EXTRUDER
		30101899	CHEM MFG PLASTICS PRODN NOT CLASSIFIED SEE COMMENTS
		30103001	CHEM MFG AGRICULTURAL CHEM AMMONM PHOSPHATES DRYER/COOLER
		30103002	CHEM MFG AGRICULTRL CHEM AMMONM PHOSPHATES AMMONIAT-GRANULTR
		30103099	CHEM MFG AGRICULTRL CHEM AMMONM PHOSPHATES NOT CLASSIFIED **
		30103299	CHEM MFG INORGNC CHEMCLS SULFUR(ELEMENTAL) NON-IDENTIFIED
		30109199	CHEM MFG ORGANIC CHEMCLS KETONE PRODUCTION NOT CLASSIFIED
		30111299	CHEM MFG INORGNC CHEMCLS ELEMNTL PHOSPHROS OTHER NOT CLSSFD
		30112540	CHEM MFG ORGANIC CHEMCLS VINYL CHLORIDE GENERAL
		30112545	CHEM MFG ORGANIC CHEMCLS VINYL CHLORIDE DRY CLMN/VCM
		30113004	CHEM MFG AGRICULTURAL CHEM AMMONIUM SULFATE ROTARY DRYER
		30113099	IND PROCESS CHEM MFG\AGR. CHEM\AMMONIUM SUPHATE\N.C.
		30125301	CHEM MFG ORGANIC CHEMCLS GLYCOL ETHERS GENERAL
		30202601	FOOD/AGRICLTR AGRIC.PRODUCTION SEED PROCESSING GENERAL
		30301299	MINING OPER METAL ORE MINING TITANIUM ORE NOT CLASSIFIED
		30302402	MINING OPER METAL ORE MNG LOW MOISTURE ORE SECONDRY CRUSHING
		30302411	MINING OPER METAL ORE MNG DRYING-ALL MINERL BUT TI/ZR SANDS
		30302499	METAL MINING GEN PROCESS\NOT CLASSIFIED
		30501903	METAL ORE MNG TALLIC MINRL PHOSPHATE ROCK TRANSFER/STORAGE
		30503199	MINING OPER NONMETALLIC MINRL ASBESTOS MINING NOT CLASSIFIED
		30504030	PRIM METAL NS UNSPECIFIED ORE SEE COMMENT PRIMARY CRUSHER
		30510101	MINERAL PRODUCTS BULK MATERIALS CONVEYORS AMMONIUM SULFATE
		33000299	SEE COMMENT **
		40201502	ORGNC SOLVNT SURFACE COATING MAGNET WIRE CLEAN/PRETREATMNT
		40201599	ORGANIC SOLVENT SURFACE COATING MAGNET WIRE SEE COMMENT
		40201601	ORGNC SOLVNT SRFACE COATNG AUTO/LGHT TRUCK PRIME EDP/DIP/SPY

Appendix C

Residual Discharge Inventory System Field Descriptions

plant.dbf

*	PROVODE	- Province code
*	SIC	- Standard Industrial Classification Code
*	PLANTID	- Plant Identification Code
	YEARCODE	- Year code to link YEAR file
	WEEKCODE	- Week code to link WEEK file
	DAYCODE	- Day code to link DAY file
*	YEAR	- Year associated with discharge data
	CAPACITY	- Plant capacity
	PRODUCTION	- Plant production
	PRODUNITS	- Plant capacity/production units

process.dbf

*	PROVODE	- Province code
*	SIC	- Standard Industrial Classification code
*	PLANTID	- Plant identification code
*	YEAR	- Year
	PROCESSID	- Process identification code
	PROCESS NAME	- Name of process
	SCC -	Source Classification Code
	BASEQTYID	- Base quantity identification code to BASEQUANTITY file
	VALUE	- Base quantity
	BQ UNITS	- Unit of the base quantity rate
	PVAR1	- Represents process variable 1.
	P1UNITS	- Units of process variable 1.
	PVAR2	- Represents process variable 2.
	P2UNITS	- Units of process variable 2.
	FUELTYPE	- Process fuel type
	FUELQTY	- Fuel quantity used by process

	FUELUNITS	- Units of the fuel quantity
	SULFUR	- Sulfur content of fuel in percent
	ASH	- Fuel ash content in percent
	HEAT	- Fuel heat content

devicl.dbf

*	PROVODE	- Province code
*	SIC	- Standards Industrial Classification code
*	PLANTID	- Plant identification code
*	YEARD	- Year of device implementation/commissioning
*	PROCESID	- Process identification code
*	DEVICEID	- Device code
	DEFHT	- Height of source in meters
	DEVDIAM	- Diameter of source in meters
	MV	- Exit velocity from source
	VELUNITS	- Units of the exit velocity "MV"
	MT	- Exit temperature from source in degrees celsius
	MF	- Flow rate of the medium
	FRUNITS3	- Flow rate units

contam.dbf

*	PROVCODE	- Province code
*	SIC	- Standard Industrial Classification code
*	PLANTID	- Plant identification code
*	YEAR	- Year
*	DEVICEID	- Device identification code
*	CCODE	- Contaminant code
	ORIGIN	- Origin of contaminant - fuel, cooling or process
	UDISFACT	- Uncontrolled discharge factor, i.e., uncontrolled emission rate
	DISFACT	- Controlled discharge factor, i.e., controlled emission rate

	DISUNITS	- The units of the discharge factor - either controlled or uncontrolled
	CNTL1	- The primary control device
	CNTL2	- The secondary/supplement control device
	CONRATE	- Composite control rate
	DISCHQTTY	- Amount of liquid/solid waste discharged
	DISCON	- Concentration of contaminant in discharge (liquid/solids)
	DISCOUNITS	- Units of "DISCON"
	COLMED	- Cooling medium
	COLQTTYA	- Quantity of cooling medium used
	COLUNITS	- Units of cooling medium quantity
	RECRATE	- Recycling rate of collected contaminant
	COMPMETH	- Computational method used
	METH	- Computational method code
	REASCH	- Reasons for changing the computational method
	ERROR	- Percentage of error in emissions estimate
	UPDATEBY	- Person responsible for the last update

compon.dbf

*	PROVCODE	- Province identification code
*	SIC	- Standard industrial classification code
*	PLANTID	- Plant identification code
*	YEAR	- Year
*	PROCESSID	- Process identification code
*	DEVICEID	- Device identification code
*	CCODE	- Contaminant code
	COMPID	- Component identification code
	COMPNAME	- Name of component
	FRACTION	- The fraction of the component within the contaminant associated specific to the process

yeardata.dbf

*	YEARCODE	- Process specific code that links the monthly activity profile to the process
	JANUARY DECEMBER	- Activity level for the month as a percent of annual activity occurring in the month
	YEARDATA	- Plant specific code that links the monthly activity profile to the plant

weekdata.dbf

*	WEEKCODE	- Process specific code that links the daily activity profile to the process
	MONDAY	- Activity level for the day as a percent of the total activity for a week/
	SUNDAY	
	WEEKDATA	- Plant specific code that links the daily activity profile to the plant

daydata.dbf

*	DAYCODE	- Process specific code that links the hourly activity profile to the process
	HOUR01 HOUR 24	- Percentage activity for 000 h - 0100 h - 2300 H - 2400 H
	DAYDATA	- Plant specific code that links the hourly activity profile to the plant

* **Key Fields**